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An Address

ON

THE RESULTS OF OPERATIONS FOR CARCINOMA OF THE TONGUE,

WITH AN ANALYSIS OF 197 CASES.

DELIVERED BEFORE THE INTERNATIONAL SURGICAL SOCIETY IN BRUSSELS, SEPTEMBER, 1908.

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[WITH COLOURED PLATE.]

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I.

I BELIEVE that the following cases comprise all those in which I have operated for carcinoma of the tongue. The first operation was performed in 1881, and the last a few months ago (June, 1908).

In the year 1895 I first performed a planned operation for the *removal of the contents of the anterior triangle of the neck*, which was founded on the experience which I had gained from observation of the places in the neck in which the glands are most liable to be diseased. Since that time 70 patients have submitted to that operation. In 44 other patients it has not been performed for various reasons, chiefly on account of the difficulty of inducing the patients to submit to it.

The operations on the tongue have been performed almost entirely through the mouth, and the lower jaw has never been divided, although portions of it have been removed in a number of cases. The object of the operation has been to remove the disease together with, if possible, about three-quarters of an inch of surrounding healthy tissues.

At the commencement of the year 1900, I began to perform a *preliminary laryngotomy* before proceeding to the removal of the disease of the tongue. This operation has been performed in all cases since that time, amounting in number to between sixty and seventy. It is highly to be recommended, for it has all the advantages of tracheotomy without the disadvantages. It can be performed in less than one minute. It enables the operator to deal much more deliberately and effectually with the disease of the tongue, however extensive this may be, and it enables the anaesthetist to pursue his duties without interruption.

The patients have been traced with great care, but the information which has been obtained respecting the further history of some of them is naturally defective. Thus, it has not always been possible to determine whether recurrence took place in the tongue or in the glands, or the exact relation which the recurrence bore to the disease which was removed. Even with these defects the results are very interesting, and I have tried to answer a number of questions by a careful analysis of them. The answers to some of the questions must not be regarded as final. Further experience may prove that they require

DESCRIPTION OF COLOURED PLATE.

Fig. 1.—From a doctor, aged 30 (Dr. H. D.). Old areas of leucoplakia on the fore-part of the border of the tongue. Excoriated, very slightly raised area further back, red and glossy, looking just as if it had been rubbed sore by a rough tooth. Has had ulceration here for some time, but the place only became a *little* harder a fortnight before I saw it. Examined by the Imperial Cancer Research. (March, 1906.)

Fig. 2.—From a man, 70 years of age. Old leucoplakia, with a slightly raised, glazed, and granular epithelioma of short duration. Examined by the Imperial Cancer Research. Mr. F. (July, 1907.)

Fig. 3.—From a man, 60 years of age. Leucoplakia, with a red, smooth, circumscribed plaque, with a slight depression in the centre. It felt quite thin, like a little piece of parchment in the mucous membrane. It had only been noticed four or five weeks. On removal it was found to be almost ¼ in. thick, much more than had been suspected. And, on microscopical examination, it had infiltrated the muscles far below its apparent limit. Examined by the Imperial Cancer Research. Mr. A. (December, 1906.)

Fig. 4.—From a man, 60 years of age (Colonel L.). A white granular area of leucoplakia of many years' duration, which has recently become malignant. There is no ulceration or excoriation, but the plaque is harder than usual. Examined by the Imperial Cancer Research. The cancer cells were already beginning to pass down between the muscular fibres. (June, 1908.)

Fig. 5.—From a man, aged 49 (Mr. C.). Old thin leucoplakia and chronic superficial glossitis, with one slightly raised spot, red like a pimple. This was suspected to be epithelioma, and was examined by the Imperial Cancer Research. Dr. Bashford could not be sure whether it was or was not an epithelioma. (February, 1907.)

Fig. 6.—From a man, aged 40 (Mr. F.). Small raised, very firm tumour, very fixed in the surface of the tongue. The surface of the tongue was otherwise perfectly natural everywhere. Of about three months' duration. Not red, glazed, excoriated or ulcerated. Very slightly rounded on the surface, otherwise like the top of an almost flat button. Not granular or warty. About the same colour as the surface of the tongue, so that I did not at first notice it. On section, dense white, cutting like gristle, not looking like epithelioma, but more like fibrous tissue. Very circumscribed against the muscle beneath. Examined by the Imperial Cancer Research and by Dr. Goldmann of Freiburg. (February, 1908.)

modification. But, for the present, they may be taken as representing very truthfully my own views of the surgery of carcinoma of the tongue.

With regard to the cases themselves, it must be understood that there has been no selection. Operation has been performed during the entire period of twenty-seven years on every patient who was deemed likely to be relieved by it, whether in hospital or private practice. Thus, while it has been my good fortune to operate on some very favourable cases, it has also been my misfortune to be called on to operate on a number of cases which proved to be quite hopeless. On the whole my cases were probably no better and no worse than those which fall to the lot of every surgeon who is engaged pretty largely in this kind of practice. Although, naturally, most of the very bad cases have been failures, a sufficient number of them have been successes to encourage operators not to decline to operate on them. I have been astonished at the success which has attended resolute surgery in some of those in which the result seemed to be hopeless.

But the future of the operative surgery of carcinoma of the tongue undoubtedly lies in *early diagnosis* of the disease and in the *routine removal of the glands* before they are obviously enlarged.

II.

Results of 197 Cases of Cancer of the Tongue operated on by Mr. Butlin in Private and Hospital Practice between the Year 1881 and the present Year (June, 1908).

Died of operation	20
Lost sight of after operation	1
Died of recurrence in the mouth	26
Died of affection of glands without recurrence in the mouth	29
Died of recurrence in the glands without recurrence in the mouth	10
Died of recurrence in mouth and glands	7
Died of recurrence, uncertain whether in mouth or neck or both	10
Died of affection of the glands, uncertain whether recurrence in the mouth	3
Died of recurrence in the glands, uncertain whether recurrence in the mouth	1
Died of affection of glands on other side of neck	2
Died of secondary disease of lungs	1
Died of cancer of the opposite border of tongue	2
Palliative operations (glands too advanced for removal; cancer of tongue only removed)	3
Operation on tongue abandoned	4
Operation on glands abandoned	1
Cases not countable (operations performed within three years; the patients either died of other diseases within three years or are still alive and well within three years)	22
Successful (all these patients lived for from three to twenty-two years free from recurrence; most of them are still alive and well)	55
Total	197

III.

Causes of Death from Operation.

Died suddenly during the operation	1
Sepsis of wound	1
Septic pneumonia	10
Subsequent haemorrhage	3
Shock	2
Suffocation (sudden, a week after operation)	1
Heart-failure (some days after light operation in feeble patient, aged 77 years)	1
Acute mania (wound doing well)	1
Total	20

One of the patients who died of haemorrhage was "a bleeder," and was acquainted with the fact, but concealed it as he wished to have the operation performed.

IV.

Successful Cases: Fifty-five Persons, whose Cases were traced for more than Three Years after the last Operation on Tongue or Glands.

Dead.

Cause.	Years after Operation.
Apoplexy, more than	3
Influenza	4
Acute bronchitis	6
Intra-thoracic disease (? cancer)	10
Old age	11
Old age	12
Old age	12
Epistaxis	15

Total, 8 cases.

Traced for the following Periods after Operation.

No. of Patients.	Years after Operation.
2	4
2	7
2	8
2	8

8 cases.

Alive and Well up to Date (1908).

No. of Patients.	Years after Operation.
4	3
4	4
3	5
4	6
4	7
4	8
4	10
1	11
2	12
2	13
2	14
2	16
1	17
1	19
1	22

39 cases.

In addition to the above cases, 4 persons died of other disease than cancer of the tongue and glands between one and three years after the last operation, and 6 patients are still alive and well between one and three years after the last operation.

V.

Comparison of Results between the first Ninety-eight Cases and the second Ninety-nine Cases.

First 98.		Second 99.
11	Died of operation	9
0	Lost sight of after operation	1
16	Died of recurrence in mouth	10
21	Died of affection of glands without recurrence in mouth	8
6	Died of recurrence in glands without recurrence in mouth	4
4	Died of recurrence in mouth and glands	3
6	Died of recurrence, uncertain whether in mouth or neck, or both	4
0	Died of affection of glands, uncertain whether recurrence in mouth	3
1	Died of recurrence in glands, uncertain whether recurrence in mouth	0
0	Died of affection of glands on other side of neck	2
1	Died of secondary disease of lungs	0
0	Died of cancer of other border of tongue	2
0	Palliative operations	3
2	Operation on tongue abandoned	2
0	Operation on glands abandoned	1
7	Cases not countable	15
23	Successful	32
98	Total	99

VI.

In the year 1895 I began the routine removal of the contents of the anterior triangle. Out of 114 cases since that time, I removed the contents of the anterior triangle in 70, and did not remove them in 44 cases.

Analysis of the Forty-four Cases in which the Contents of the Anterior Triangle were not removed.

(To these should be added 8 cases in which the patients returned at a later period for removal of enlarged glands, which were not intended to be removed when the tongue was treated, making a total of 52 cases.)

Died of operation	6
Died of recurrence in the mouth (in 3 of these the operation was abandoned)	7
Died of affection of glands (in 5 of these the glands were enlarged at the time of operation on the tongue, but were not removed for various reasons)	15
Died of cancer of opposite border of tongue	1
Cases not countable	3
Successful cases	12
Total	44

Eight Cases in which the Glands were Removed at a Later Period because they became Enlarged.

(These cases are also included in the 70 cases of removal of the anterior triangle.)

Recurrence, uncertain where	2
Recurrence in the glands	1
Lost sight of after operation	1
Died of other disease within three years	1
Successful	3
Total	8

Six patients who died of the operation must be deducted from the total of 52 patients, leaving 46 patients. The glands are known to have become enlarged at a later period in 10 + 8 = 18. In addition, they were enlarged at the time of operation on the tongue in 5 other cases, but were not removed. And there are 3 cases (not countable) in which they may still become enlarged.

The percentage of successful cases out of the 44 patients for whom the glands were *not* removed is as 12 to 41 (for the three not-countable cases must be deducted from the total of 44) = 29.26 per cent.

The causes of death from the operation were:

Acute mania	1
Haemorrhage (in one old man occurred on the night of the operation and proved fatal; in the other case proved fatal nine days after a very severe operation on the floor of the mouth and posterior part of the tongue)	2
Heart failure (when the wound was nearly healed, in a very feeble, gouty subject, 77 years old)	1
Sepsis and anterior mediastinitis	1
Septic pneumonia	1
Total	6

Analysis of the Seventy Cases in which the Contents of the Anterior Triangle were Removed.

Died of the operation	6
Lost sight of after operation	1
Died of recurrence in the mouth	9
Died of recurrence, uncertain where (in one of these the glands could not be entirely removed; operation abandoned)	7
Died of recurrence in the glands (in one of these the submaxillary salivary gland was left and the disease recurred beneath it; in the other 7 cases the glands were enlarged at the time of their removal, and in 5 of these they were demonstrably cancerous)	8
Died of cancer on the opposite side of the tongue	1
Died of affection of glands on opposite side of neck	2
Died of other disease within three years	1
Cases not countable	11
Successful cases	24
Total	70

The successful cases are calculated on the 70 cases, after deducting cases not countable (11), the patient who died within three years of another disease (1), and the patient who was not traced after the operation (1), leaving 57 cases, with 24 successful cases = 42.01 per cent.

The age of the patients operated on showed that 10 of them were over 65 years of age, and 1 over 70 years (77).

The causes of death from the operation were:

Haemorrhage, etc. (both from mouth and neck in a badly alcoholic patient)	1
Suffocation (from the sudden falling back of the root of the tongue some days after operation	1
Septic pneumonia	4
Total	6

VII.

Should the Operation on the Tongue and the Removal of the Glands be Performed at a Single Sitting?

The 70 cases in which the contents of the anterior triangle were removed may be tabulated as follows:

Single sitting:	
Glands enlarged	12
Glands not enlarged	10
Total	22

with 4 deaths due to the operation

Separate sitting (shortly before or after operation on the tongue):	
Glands enlarged	16
Glands not enlarged	22
At a later period:	
Glands enlarged	8
Glands not enlarged	2
Total	48

with 2 deaths due to the operation.

Total of the last two groups 48, with 2 deaths due to the operation. In one of these cases the operation on the glands was undertaken twelve days after the operation on the tongue, and a further portion of the tongue was cut out because I feared I had not removed sufficient at the first operation. This further portion was in the floor of the mouth, and the entire wound in the neck became septic.

It will be noticed that the glands were already enlarged in 12 of the 22 cases in which the two operations were performed at a single sitting, and this was one of the reasons why the operation on the glands was not deferred.

It will also be noticed that in 8 of the 10 cases in which the glands were removed at a later period they were enlarged. Indeed, the patients would not have submitted to the operation had the glands not been enlarged. In spite of this, all these 8 patients recovered from the operation, and in 3 out of the 8 the operation was followed by complete success. The following paper, however, shows that such success must be regarded as exceptional.

VIII.

Is there any Advantage in Postponing the Operation on the Glands until they are Enlarged? *

For the consideration of this question, 56 cases, in which the results are known, may be used.

Glands enlarged at the time of operation, 34:	
Died of recurrence in the neck	7
Successful	11
Glands not enlarged at the time of operation, 22:	
Died of recurrence in the neck	1
Successful	13

It will be seen that the evidence is largely in favour of not deferring the operation until the glands are enlarged.

In the single case of recurrence in the neck in the second series, the submaxillary salivary gland was not removed, but was raised up for the removal of the glands beneath it. Recurrence took place in the lower part of the salivary gland, presumably due to affection of a lymphatic gland which had been overlooked.

In the first series of 34 cases the glands were not obviously cancerous in the large majority of the cases, but they were so in some of the cases. Nevertheless, some of these patients were cured by removal of the cancerous glands, and remained well after many years. One case is especially worth recording in this respect. On June 8th, 1903, the right half of the tongue was removed from a gentleman, aged 56. At the same time the contents of the anterior triangle were dissected out. But a mass of glands beneath the great vessels was so fixed and the patient was so exhausted by the operation, that it was deemed inexpedient to persist in the attempt to remove them. On June 18th I summoned up my courage and again attacked the fixed glands, which were removed with considerable difficulty. The family doctor wrote me in April of this year (1908) to say that his patient is in perfect health, and has not had recurrence either in the tongue or in the glands.

If the operation were restricted, as it used to be, to the removal of glands which are obviously enlarged, the suggestion to defer the operation until the glands are enlarged would have some weight. But as the methodical removal of the contents of the anterior triangle is not restricted to the removal of the glands, but is extended to the removal of the tissues in which the glands are known to lie, the suggestion should not be accepted.

* This suggestion is made in a well-known English work on *Surgical Treatment*, dated 1902.

IX.

Is the Removal of the Contents of the Anterior Triangle sufficient as a Routine Procedure? Or, ought the Contents of the Posterior Triangle on the Same Side also to be Removed?

In my 70 cases there were very few in which the dissection was carried to the extent of removing the contents of the posterior triangle or of dividing the sterno-cleido-mastoideus. Yet there were only 8 cases in which the disease was noted to have recurred only in the neck.

In one of these the recurrence took place owing to the omission to remove the submaxillary salivary gland. And in the other 7 cases the glands were enlarged at the time of the operation; in 5 of the 7 they were macroscopically and microscopically cancerous.

I would recommend that the dissection should be carried into the posterior triangle in those cases in which the primary disease is seated far back on the border of the tongue; and in those cases in which the glands are badly affected in the parotid (upper carotid) region.

I would further advise that the dissection should always be carried well up to remove the glands in the parotid region. For this purpose it is necessary to remove the lower part of the parotid salivary gland. In one of my early cases of removal of the anterior triangle the patient died of the operation. At the autopsy an enlarged gland was found in this situation, which had not been removed at the operation.

X.

Is it Necessary to Remove the Glands on Both Sides of the Neck?

The cases of which I have notes are not sufficient in number for the decision of this question. There may have been other cases, among those of which the further history is imperfect, in which the glands were affected on both sides of the neck. So far as the records go, they do not favour the view of the necessity of subjecting every patient to the removal of the glands on both sides of the neck. They are as follows:

Cases in which the glands were affected on both sides of the neck	9

In 6 of these 9 cases both sides of the tongue were affected by the primary disease.

In the other 3 cases the primary disease was of one border of the tongue, and, in 1 of the 3, was some distance from the tip.

Cases in which the glands were affected only on the side opposite to the disease ...	3

In 1 of the 3 the primary disease was near the tip, and in another of the 3 it was about 1 in. from the tip. In both those cases the glands were removed from the opposite side of the neck only, and those 2 patients are alive and well many years after the operation.

Cases in which the glands on the opposite side of the neck became diseased after successful removal of the primary disease and the glands on the same side... ...	2

In both these cases the primary disease was situated on the border of the tongue, and was of rather small extent. It was some distance back on the border in both cases. It showed microscopic signs of excessive malignancy in one of the cases.

XI.

If it is not Necessary to Remove the Glands on Both Sides of the Neck in every Instance, are there Cases in which this Procedure is Desirable?

The following conditions appear to me to call for wider removal of glands:

(i) Those cases in which the glands on both sides of the neck are enlarged.

(ii) Those cases in which the glands are affected only on the side of the neck opposite to the disease.

(iii) Those cases in which the disease is seated on both sides of the tongue, or in which it reaches to the middle line of the tongue.

(iv) Probably it ought to be done in those cases in which microscopical examination gives reason to believe that, although the primary disease is apparently only of small extent and depth, it is much more malignant than usual; when, for instance, columns of cancer cells are found running deeply down between the muscular fibres.

XII.

Is it Necessary in all Cases to Remove the Muscles to their Attachments?

(During the last two or three years researches on the spread of cancer of the tongue have been made by Mr. Lenthal Cheatle, C.B. He has found, in microscopic sections of the muscles at a considerable distance from the primary disease, columns of cancer cells lying between the fibres of muscles, which look quite healthy to the naked eye. He therefore recommends that, according to the seat of the primary disease, the genio-hyoglossus and inferior lingualis or the hyoglossus or the stylo-glossus muscle should be removed back to its attachment to the bone. In cases of cancer of the anterior part of the tongue and the tip, the genio-hyoid muscle and the fascia covering it should be removed. If the primary disease is so situated as to extend into both halves of the tongue, some or all of these muscles should be removed on both sides. As the result of his researches Mr. Cheatle is of opinion that the hyoglossus and genio-hyoglossus and inferior lingualis muscles should be removed in every case of cancer of one half of the tongue, even if the primary disease is quite small and in an early stage of its existence.)

Out of the 197 cases there were 99 in which there was no recurrence in the tongue. They are classified as follows:

Died of affection of the glands	39
Died of affection of the glands on the other side of the neck	2
Died of cancer of the lungs	1
Died of cancer of the other border of the tongue	2
Successful	55
Total	99

In addition to these 99 cases there are a number of other cases which cannot be counted because less than three years have elapsed since the operation. But as from two to three years have elapsed in many of them there is now no reason to apprehend recurrence *in situ*.

On the other hand there were 33 cases in which the disease is known to have recurred in the mouth. Most of them are noted as bad or extensive cases; in seven of them the floor of the mouth was affected to a greater or less extent; and in only three of them was the disease of such small extent that I felt afterwards that it would not have recurred in the mouth if it had been more widely removed.

Although these figures do not support Mr. Cheatle's suggestion, I think it will be desirable to carry it into effect in the more advanced cases, especially in those in which the disease lies beneath the border of the tongue and passes into the floor of the mouth.

The objections to it in addition to the larger operation which it involves, are that the mobility of the tongue has been, in those few cases in which I have practised it, seriously impaired, and in consequence speech and mastication have not been nearly so good as in those cases in which the disease has been merely cut out without reference to the complete removal of individual muscles.

XIII.

Is it Necessary to Remove the Tissues between the Primary Disease and the Glands?

Although I cannot answer this question decidedly in the negative, the evidence in favour of this course is not, in my opinion, strong enough to justify the extra risk involved. For, in order to carry it out methodically and completely, it would be necessary to remove the primary disease and the glands in one continuous mass. In all but a few cases, the large wound in the neck, in which the great vessels and nerves are exposed, would suppurate, in most cases badly. The risk to life would therefore be very largely increased, and should not be incurred unless a very decided advantage can be claimed for the procedure.

Out of 70 cases in which the anterior triangle was completely cleared out, and a number of other cases in which glands were simply dissected out because they

were enlarged, I have very rarely removed the primary disease and the glands in one continuous mass. Yet 29 of these cases proved to be successful. And out of a large number of the unsuccessful cases, in which recurrence took place either in the mouth alone or in the mouth and neck, and in which the seat of the recurrence was noted, there are only two in which it could reasonably have been attributed to affection of the tissues which were left behind between the primary disease and the glands.

XIV.

Is there any Part of the Tongue from which the Glands are less liable to become Affected?

In 23 cases out of the entire series of 197 only the primary disease was removed, but the patients remained free from recurrence *in situ* and from affection of the glands (successful cases).

The seat of the disease, roughly noted, was as follows:

Dorsum:	
Anterior	8
Further back	2
Border:	
Near the tip	1
At various points	4
Beneath the border	7
Tip:	
Under surface	1
Total	23

For comparison with these cases, I have taken 23 cases (between the 87th and the 197th) in which the glands were not removed, but became affected at a later period:

Dorsum:	
Anterior	4
Border:	
Near the tip	5
At various points	9
Beneath the border	2
Fraenum	2
Extensive disease	1
Total	23

In addition to the case which is classed as extensive, because its point of origin was not ascertained, there were several cases in both series in which the disease of the tongue was extensive, but it was possible to determine the point at which it had first appeared.

Perhaps the anterior part of the dorsum is the least dangerous seat of cancer, *quâ* affection of glands. But the results of the second series of cases show that it would not be safe to rely on a special immunity of that part in practice. In one of the cases the primary disease was of quite small size, and had only been noticed a short time.

XV.

Does Early Diagnosis render the Prognosis of Operation more Favourable?

Very small and, presumably, recent cancers were removed in 18 of my cases. They were seated in different parts of the tongue, so that no conclusion can be drawn with reference to the seat of the disease. The results were as follows:

Recurrence *in situ*	2	
Died some years later of cancer of the opposite border of the tongue	2	
Died of affection of glands without recurrence *in situ*	6	
Successful (glands removed)	2	8
Successful (glands not removed)	6	
Total	18	

It will be seen that the percentage of successes, 8 in 18, was 43.33. And, in 6 of these cases, the operation was restricted to removal of the primary disease.

On the other hand, no fewer than 6 of the patients died at a later period of affection of the glands without recurrence in the tongue. This furnishes very strong evidence of the necessity of removing the glands even in cases of quite small and recent cancer of the tongue.

With regard to the 2 cases of recurrence *in situ*, 1 of them occurred many years ago, and the operation was not as wide as I have been in the habit of practising since that time (largely on account of the failure which followed this particular operation). In the other case there is reason to believe the cancer was much more virulent than usual, for the operation which was practised would have sufficed for any but a virulent case.

XVI.

Cancer of the Floor of the Mouth.

An impression generally prevails among surgeons that cancer which originates in the floor of the mouth is peculiarly dangerous to life.

The following facts may serve to correct this impression, which I formerly held in common with my surgical colleagues:

No. of cases occurring in my practice, 9:	
Died of recurrence in the mouth	4
Died of affection of the glands without recurrence in the mouth	1
Successful	4
Total	9

In all the 5 unsuccessful cases the disease was seated at or close to the fraenum linguae, and in 3 of them had invaded the bone, so that a portion of the jaw had to be removed. These cases were, therefore, peculiarly unfavourable for operation.

In 3 of the 4 successful cases the disease was also situated at the fraenum, but it was not adherent to the bone. In 2 of these cases the glands were removed shortly after the operation on the floor of the mouth. These 2 patients are both well at the present time, three years after the operation. In the third case the glands were not removed, and the patient remains well ten years after the operation. In the fourth case the cancer was of very small size, seated beneath the front of the tongue, where it joins the floor of the mouth. It was freely removed, but the glands were not dissected out. That patient is still alive and well, at the age of 79, twenty-two years after the operation.

From these facts it may fairly be assumed that cancer originating in the floor of the mouth can be removed with a good prospect of success, provided it is not very extensive and has not involved the bone. But the two cases in which the operation was successful, although it was limited to the removal of the disease in the mouth, must not be taken to encourage operators to refrain from removing the glands. In most of the cases they were either affected at the time of the operation or became affected with the recurrence of the disease in the mouth.

XVII.

Operations for Recurrent Disease.

Tongue.—Only in five instances has there been an operation for recurrence of the disease in the tongue, and in one of these the disease was not truly recurrent. In 1890 the right border of the tongue was removed for epithelioma. The patient was a very free liver, drank and smoked a great deal. In 1900 some white plaques were removed from the same border of the tongue, but no cancer was found in them. In 1905 (fifteen years after the first operation), he had an epithelioma of the same border, with enlargement of the glands. An attempt was made to remove the disease by one of my colleagues, but the operation was not successful and the patient died in June, 1906.

All these operations for recurrent disease in the tongue were performed in the first 70 cases, 4 of them in the first 30 cases. The disease was not as thoroughly removed as in the cases during the last fifteen or more years. Not one of these lives was saved by the second operation. Two of the 4 patients died of recurrence in the tongue; the other 2 died of affection of the glands, which had been imperfectly removed in both cases.

Glands.—Eight patients were operated on for recurrence in the glands. Again, it is noticeable that 7 of these cases occurred in the first 90 cases, and only 1 in the remaining 107; in that case the submaxillary salivary gland was left for cosmetic purposes, with disastrous result.

The lives of 2 of these 8 patients were saved. The first was an old man, from whom the anterior part of the tongue and some enlarged glands were removed in September, 1893. In May, 1894, two glands were enlarged at the angle of the jaw, and were removed. He came to see me

in 1902—eight years after the second operation—very well, but very feeble from old age.

The second of these patients was a woman from whom one side of the tongue was removed in October, 1894. In December of the same year two or three enlarged glands were removed, and in the following February (1895) some more glands. She remains quite well up to the present time—a period of more than thirteen years.

The results of operations for the removal of recurrent disease, whether of the tongue or glands, have been so bad that operators are counselled to make the first operation as complete as possible, in the belief that the only hope of the patient lies in the thorough manner in which this operation is performed.

THE OPERATIVE TREATMENT OF INTRAORAL CANCER:

WITH SPECIAL REFERENCE TO THE CHOICE OF OPERATION, ORDER OF OPERATION, AND LIGATURE OF THE LINGUAL AND FACIAL ARTERIES.

FROM AN EXPERIENCE OF THIRTY-NINE CASES.

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FEW surgical diseases offer a wider choice of operative procedure for their cure or relief than carcinoma within the oral cavity. There are those surgeons, for instance, who strongly advocate a preliminary laryngotomy or even tracheotomy, others who have never found any necessity for their performance; those who favour preliminary ligature of the linguals, others who never practise it and speak disparagingly of it; those who recommend the operation on the tongue and neck at one sitting, others who usually do it in two; those who remove first the tongue and later the glands, others who remove first the glands and later the tongue; those who perform Kocher's operation, which entails a communication between a septic wound in the mouth and an extensive recent wound in the neck, others who see grave objections to it on these grounds; those who frequently divide the lower jaw, others who consider it seldom necessary; and so on. The purport of the present communication is to consider the modern surgical treatment of intraoral cancer, in conjunction and in comparison with my own experience in dealing with it, with the view, if possible, of indicating what appear to me to be the most rational and practical methods to adopt. I assume that the following general statements and principles will be subscribed to by all modern surgeons.

1. *The Necessity of a Wide Local Removal.*—This will usually mean the sacrifice of not less than half the tongue, frequently of the whole tongue, sometimes of a considerable portion of the floor of the mouth, part of the lower jaw, even exceptionally of the upper jaw, side wall of the pharynx, etc., according to the position and extent of the growth. Wherever the disease is situated, to be considered at all hopefully operable, it must be capable of a wide local removal, and I mean by this an excision which ensures a wide margin of apparently healthy tissue attached all round the growth. This is an important point, because cancer, distressing enough in any situation, is so peculiarly distressing in the mouth that, even as a palliative measure, to secure a non-recurrence *in situ* must be a particular aim of the surgeon. In carrying out this principle we are hampered considerably by the limitation of the cavity of the mouth; there is not the same scope for cutting wide of the tumour as in the breast for instance. If the disease, therefore, is so advanced, or so situated, or so fixed as to be incapable of a wide local removal, then in my opinion it is inoperable, because though a patient, after the dangers have been explained to him, is quite justified in risking his life in an attempt to be rid of such a terrible disease as cancer in the mouth; and though the surgeon, who knows the full extent of the misery which is in store for him is quite justified in urging him to undergo this risk, yet if the disease is to return *in situ* within a few weeks or months and his misery is to begin all over again, it is better to let him die once than twice, and not subject him to the trial of a serious operation into the bargain. Of course, the surgeon cannot guarantee against local recurrence, for apparently healthy tissue may contain cancer cells, but he should have this prospect particularly in view in recommending or discountenancing operation, and in whatever operative procedures he adopts. If, on the other hand, recurrence takes place in the neck, even within a short time, the case is different. The disease here, distressing enough, is so much less so than in the mouth that the intraoral operation will have been worth the doing, though if it has taken place in an early stage the patient, who will be ignorant of the misery he has escaped, will not fully appreciate the surgeon's effort.

2. *The necessity of a wide glandular dissection in all cases* in accordance with the modern principle of treating cancer surgically. This entails the removal of the fascia, fat and lymphatics from the submaxillary triangle (including in all cases the submaxillary salivary gland), and from the anterior triangle, down to the sheath of the great vessels, as well as the deep chain of lymphatic glands beneath the sterno-mastoid, from the clavicle to the atlas. The necessity of performing this extensive operation on both sides in all cases has not been finally determined. If the disease crosses or even approaches the mid-line in the tongue or floor of the mouth it is demanded; it is also demanded if the disease, though unilateral, is situated towards the base of the tongue, because there is a free communication across the mid-line between the lymphatics of that part. If the disease is situated anteriorly and is strictly unilateral the general opinion is that a dissection of one side is enough. Sufficient evidence to settle this question is not at present forthcoming, and surgeons and pathologists should direct their attention to it. Da Costa has recently recorded a case in which, the primary disease being strictly unilateral, the glands on both sides of the neck were secondarily affected. The matter is an important one for decision, because a bilateral neck dissection adds considerably to the severity of the operation.

3. Consequent on (1) and (2), the operation is very severe and serious. But there are other well-recognized circumstances which make it especially dangerous. Patients with cancer in the mouth are usually getting on in life; they are frequently quite old; they are often the subjects of past syphilis, over-indulgence in tobacco and alcohol, as well as of the bronchial troubles that attend advancing years. They are not, therefore, the best subjects for major operation. In addition, there are special dangers attending the operative procedure itself. There is during the operation the danger of haemorrhage and of asphyxia owing to the entry of blood into the air passages. Subsequently, there is the danger of shock, of inhalation pneumonia, and of septic cellulitis owing to communication in some of the operations—Kocher's, for instance—of a septic wound in the mouth with a large recent wound in the neck. Lastly, excision of the tongue is an operation in which the psychic element is an unfavourable factor. The idea of losing his tongue, even in a successful operation, is depressing to the patient, and probably influences the result in some cases. The causes of a high primary mortality, therefore, are not far to seek, and the importance of avoiding those that are avoidable must be kept in view in determining the choice and scope of operation.

4. *The desirability of performing this operation as of all operations at one sitting if possible.* A patient will sometimes be able to screw his courage up to face a single operation who cannot be brought to face a second. This object nevertheless, however desirable, is frequently unattainable in cases of mouth cancer.

5. *The desirability of avoiding a communication between a wound in the mouth which is necessarily septic and a large wound in the neck which otherwise there is no difficulty in keeping aseptic.*

6. *The desirability of not introducing any unnecessary procedures into an operation* which of itself is quite complicated enough. Assuming that these statements and principles are correct, the practical question is how best to conform to them in the operative treatment of intraoral cancer.

LIGATURE OF ARTERIES.

I shall first state my proposition, and subsequently give the reasons for its advocacy. The proposition is:

That in every case of intraoral cancer the neck should be attacked first, one or both linguals and facials tied, and the primary growth in the mouth should be removed subsequently, either at the same or a future sitting.

As one of the chief objects of this paper is to advocate ligature of the lingual and facial arteries, which, in my opinion, is the key to the operation for intraoral cancer, I shall consider this question first. It is strange that with such powerful supporters behind it as the late Professor Billroth and Sir Frederick Treves ligature of the lingual artery should have found so little favour generally among surgeons. I think the reason is that it was advocated under quite different circumstances from those existing at the present day. Extensive gland dissections were not then in vogue. Either gland dissections were not done at all or were limited to the perfunctory removal of an enlarged gland or two beneath the jaw or in the anterior triangle. Hence ligature of the lingual introduced an additional preliminary operation; it involved a complication, was not necessary in the hands of a surgeon of skill and experience who felt confident he could deal with the haemorrhage without it, and perhaps was not always easy. But other surgical procedures may come up again for consideration under altered circumstances, and this question of ligature of the lingual artery is, I think, one. In the procedure advocated here—namely, attacking the neck in all cases first, ligature of the lingual assumes a different aspect. It is done as part of the dissection of the neck. Sometimes in dissecting the anterior triangle the lingual comes into view at its origin and may be ligated there. I have on a few occasions so performed it. The ligature is, however, almost always placed upon it immediately after the dissection of the neck, beneath the hyoglossus muscle. The submaxillary triangle has been dissected, the bellies of the digastrics are in full view, and the hyoglossus with the hypoglossal nerve and usually the ranine vein lying upon it. Ligature of the lingual becomes the simplest of proceedings; the anterior belly of the digastric is hooked downwards and forwards, the posterior downwards and backwards. The great cornu of the hyoid bone is felt, and just above it the fibres of the hyoglossus are divided by a few light touches of the scalpel. No director is used. With the aid of a pair of dissecting forceps and a blunt dissector or blunt end of the ligature forceps the lingual artery is invariably picked up just beneath the hyoglossus. I have never failed to find it with the greatest ease, and the operation for its ligature occupies less than two minutes. The only precaution necessary is to work gently and avoid wounding the ranine or any other veins in the neighbourhood. The ranine vein is usually seen running with the hypoglossal nerve upon the hyoglossus muscle, and is kept out of the way together with the nerve with a squint hook. The facial artery is always ligated and divided during the dissection of the neck when the submaxillary gland is lifted from its bed. It comes into view during this proceeding, and requires no looking for.

In April, 1904, almost a year before the publication of Mr. Butlin's paper, I commenced extensive glandular dissections of the neck in malignant disease within the mouth. On April 4th, 1904, I performed the following operation at the Royal Portsmouth Hospital:

> The patient had an epithelioma involving the whole of the right side of the tongue and dorsum to opposite the faucial pillar, and extending into the substance of the tongue on the left side. Enlarged glands were felt in the right submaxillary and anterior triangles—none in the left. The following account of the operation is taken from my notes: The left submaxillary region was dissected out, including the submaxillary salivary gland, and the left linguial and facial arteries were tied. An incision was then carried from the mastoid process on the right side along the sterno-mastoid muscle to 2 in. above the clavicle, and one to join it was carried up to the symphysis menti opposite the hyoid bone. Skin flaps, including platysma, were reflected. The glands, fascia, and fat were cleared out of the anterior and submaxillary triangles (including the submaxillary salivary gland), as well as the deep chain beneath the sterno-mastoid muscle. The right lingual and facial were tied. The tongue was then split and the right half was brought out through an incision in the mucous membrane of the mouth beneath the jaw and removed (Kocher's method). The left half was excised intraorally, as an attempt to pull it out through the wound stopped breathing. The operation was performed at one sitting, and the patient made an excellent recovery. He subsequently died of recurrence in the neck.

At the operation the glands were found infiltrating and breaking down, and the prognosis was consequently very unfavourable. When I began these extensive glandular dissections of the neck for intraoral cancer, I began to practise at the same time ligature of the lingual and facial arteries in all cases, and I shall state now the advantages that have appeared to me to attend this practice. My experience extends to ligature of these arteries on 39 occasions.

1. *It reduces the excision of the tongue to a practically bloodless operation.* Mr. Jacobson, in his remarks on ligature of the lingual artery in excision of the tongue, makes the following criticisms:

> (*a*) "In 3 cases in which I know of this precaution having been taken, the haemorrhage was as free as in the usual operation with scissors, performed without any such preliminary," and in a footnote he gives as the reason that the lingual was probably tied in front of a large dorsalis linguae.

The only answer one can give to this is that Mr. Jacobson's experience must have been singularly unlucky, and likely enough to prejudice him against the procedure. In the 39 cases of ligature of the lingual in my own experience, this has never occurred. I always pull the lingual well up and place the proximal ligature as far back as possible to avoid this contingency, though I have never seen the dorsalis linguae, and I always divide the artery between two ligatures to make quite certain that I have ligated it. In all of my cases it has reduced the excision of the primary growth to a bloodless operation, very much as it would be in the deadhouse. With few exceptions, these patients have been operated upon at the Portsmouth Hospital, where I have over and over again demonstrated to those who have done me the honour of being present the simplicity to which it reduces the subsequent excision of the growth in the mouth. Hardly ever any artery spurts at all. The facial has already been tied in removing the submaxillary gland. By these manœuvres not only has the blood supply of the tongue but of the gums and floor of the mouth been cut off, this being furnished almost entirely by the sublingual branch of the lingual and the submental branch of the facial. With regard to venous bleeding, this, as a rule, is quite trivial, as might be expected. The tongue and floor of the mouth are terminal circulatory organs. No large venous trunks are present in them, and the venous bleeding is consequently slight. The only cases in which I have found it at all troublesome are when the disease is in the tonsil and its neighbourhood, from the pharyngeal plexus and inferior palatine veins. Mr. Jacobson's second objection to ligature of the linguals is:

> (*b*) "I think that an experience derived from operations in over 50 cases justifies me in saying that if the operation with scissors be performed with attention to the details given above, the haemorrhage is not so difficult to deal with as to require this precaution." And in a footnote he adds: "In writing this I am taking it for granted that the surgeon will be aided by helpers as apt and ready as I have been fortunate enough to find."

This in some cases may be taking a good deal for granted, but with this "if" the statement is no doubt correct. It is admitted that to those experienced in excision of the tongue, and who have skilled assistance at their disposal, the control of haemorrhage is not a very difficult matter. But I think it will be equally admitted that the less blood these patients, often old and broken down with suffering, lose the better. In the hands of surgeons even of experience I have more than once seen a patient lose a considerable quantity, and even a large quantity, of blood before the completion of the operation, and I have been told by ex-house-surgeons of other hospitals that in the usual operation, without ligature of the linguals, post-operative haemorrhage is not a very uncommon event for them to have to deal with. Mr. Jacobson says: "That the haemorrhage is free with the scissors alone, none will deny." Why have haemorrhage at all? For the safe, easy, and rapid removal of the uterus we tie, as a preliminary measure, the ovarian and uterine arteries; for the safe, easy, and rapid removal of the thyroid we tie the thyroid arteries; for the safe, easy, and rapid removal of the tongue we should tie the lingual. Whether the patient lose a large or small quantity of blood; whether haemorrhage be difficult or easy to control, ligation of the lingual

and facial eliminates it, and must surely, therefore, be an advantage. As stated above, I have ligatured the lingual and facial arteries on thirty-nine occasions, on one or both sides, previous to excision of cancer in the tongue or floor of the mouth, in all possible situations, at one sitting or more. In almost every case in the latter operation no vessel whatever has required a ligature; in the remaining bleeding has been of the most trivial character. In not a single instance has there been any post-operative haemorrhage, either reactionary or secondary. Mr. Jacobson's third line of criticism against ligature of the lingual is (*c*) that it is not an easy operation, and cannot always be done quickly. I do not think the difficulty of an operation alone should deter a surgeon, though the time occupied in performing it, perhaps a natural sequence of the difficulty, would undoubtedly in these cases be an argument against it. But this criticism applies to ligature of the lingual artery independently of the dissection in the neck, and therefore is not relevant to the operation I am discussing here. As I have stated above, ligature of the lingual after dissection of the neck is a simple and easy procedure, and adds practically nothing to the duration of the operation.

2. Owing to the elimination of the one and only troublesome complication of the operation within the mouth—namely, haemorrhage—it greatly enhances its rapidity and simplicity. It reduces the actual excision of the tongue to a minor operation, which it never is without it. It consequently frequently enables the surgeon to perform an operation at one sitting which he would otherwise consider it prudent to divide into two. If, for instance, the disease is confined to the tongue and at the termination of the gland dissection the patient is in good condition, and the surgeon's judgement prompts him to remove the tongue or half the tongue at the same sitting, he knows that he has quite a trivial and bloodless operation in front of him; whereas if the tongue is excised first, and the operation has been troublesome and the patient has lost a good deal of blood, the surgeon will hesitate to submit him to a long dissection of the neck immediately afterwards. After ligature of the feeding arteries the mouth operation (unless the jaw has to be divided) becomes quite insignificant; the gland dissection is the only major operation.

3. Owing to the elimination of haemorrhage, it enables the surgeon to excise the growth in the mouth with greater precision and deliberation. This is, perhaps, its greatest advantage. The surgeon can see exactly what he is doing and where he is cutting—a matter of great importance in dealing with this disease in a confined, and not always easily accessible, cavity.

4. If, as in many cases of extensive disease, it is considered prudent to divide the operation into more than one sitting, it cuts off the blood supply to the growth meanwhile. As Sir Walter Cheyne has pointed out, the growth in the glands is frequently more rapid than in the mouth. On this ground alone it would in many cases be wise to remove the glands first. If we can put a brake on the blood supply to the primary growth at the same time it is an additional reason for attacking the glands first, for if the tongue operation is performed first we cannot in the interval cut off the blood supply to the glands.

5. Ligature of the lingual and facial arteries may starve any cancer cells in the neighbourhood which have been left behind after the completion of the operation, and in this way possibly prevent or retard recurrence. It is impossible to prove this, but it is not an unreasonable supposition, or one unsupported by experience. The ideal modern operation for cancer is to remove the entire disease—and I mean by this the primary growth and every cancer cell which has sprung from it—in one piece. This is best exemplified in the case of the breast. The ideal is to remove the breast, a wide margin round it, the lymphatics running to the axillary glands and the axillary glands themselves, all in one piece inclusive, with the object of having in the removed portion every cancer cell. That is the objective, possibly seldom attained. In the tongue this is impossible. It is impossible to remove the tongue and glands of the neck in one piece. Tissues remain between the primary focus in the mouth and the removed portions in the neck, which may and probably do contain cancer cells. Also, notwithstanding the most careful dissection, cancer cells may be left—indeed, certainly often are left—in the neck. By cutting off the blood supply to these as far as possible, we may succeed in retarding their growth or even in starving them out altogether. This is further aided by the cicatricial contraction of the large wound in the neck and in the mouth. Mott was the first to suggest ligature of the feeding arteries to inoperable malignant tumours. The same principle may be extended as an additional aid to those that are operable. We have a hint in this direction from the natural history of such tumours. The rapid and luxuriant growth of malignant tumours containing little formed fibrous tissue, and in a soil composed of young and vascular elements, the comparatively slow growth of tumours containing abundance of well-formed fibrous tissue, and in a soil composed of less vascular and atrophied elements, would suggest that cutting off the blood supply and producing abundance of cicatricial tissue in the neighbourhood of cancer cells is likely to destroy them or retard their growth. In the mouth and neck by the cicatrization of the large wounds there, after the extensive modern operation for cancer, and by greatly diminishing the blood supply to these parts by ligature of the lingual and facial arteries, especially if it be done on both sides, we are in a position to produce conditions which we know to be unfavourable to the growth of cancer naturally.

6. It does away with any necessity for preliminary laryngotomy or tracheotomy. Now opening the air passages and plugging the fauces, however simple a proceeding, introduces an additional complication, makes a wound which, owing to its communication with the air passages, is necessarily a septic wound, and should be avoided if possible. In fact its advocation is an admission of the anxieties of haemorrhage and its consequences in excision of the tongue. After ligature of the lingual and facial arteries it has in my experience never been necessary. In no single instance has the entry of blood into the air passages been a source of anxiety. It is admitted that with a skilled operator, skilled assistants, and a skilled anaesthetist, this operation may not be required, even if the lingual and facial arteries are not tied, but the latter operation greatly reduces the anxiety of blood entering the air passages, and renders preliminary laryngotomy or tracheotomy quite unnecessary.

I have stated the advantages that have appeared to me to follow an attack upon the neck first, with ligature of the lingual and facial arteries, from the experience of a considerable number of cases. Another argument for attacking the neck first is this—it is a contingency that may not often occur, but it is not without the bounds of possibility: If the tongue is removed first the patient may subsequently decline the operation upon the neck. All that is troubling him at this time is the disease in his mouth. Although he may have had it clearly explained to him that a second operation will be necessary, and although he may have made up his mind to submit to this, after he has gone through the experience of the first, and has got rid of all appreciable evidence of his disease, he may be unreasonable or his courage may forsake him, and he may refuse the second; whereas if the glands are removed first he is not likely to refuse the subsequent removal of the disease in his mouth. Patients, especially hospital patients, are occasionally very unreasonable, and no amount of argument will persuade them to follow the surgeon's advice.

The last point which I wish to emphasize, in the choice and scope of operation for intraoral cancer, is the advisability of avoiding a communication between the wound in the mouth, which is necessarily septic, and the large recent wound in the neck left after a glandular dissection. This can always be done, except, I believe, the growth be in the tonsil and its neighbourhood, and requires excision from without. Provided the disease be confined to the tongue, this can always be excised intraorally; and if the disease is in the floor of the mouth, any communication with a large recent wound in the neck can always be avoided by dividing up the operation into two stages.

Typical positions of intraoral cancer may be conveniently taken, with the view of indicating the *modus operandi* in carrying out the principles advocated in this article.

1. *The growth is confined to one side of the tongue, in a median or anterior position (with or without a slight adjacent involvement of the floor of the mouth).* This is the simplest case. The surgeon proposes to clear the anterior and submaxillary triangles on one side, tie the

facial and lingual arteries, and then remove half the tongue. Butlin's skin incision is made. There is no necessity to describe minutely the dissection. Commencing from below, and carrying the dissection upwards as far as the parotid gland, and forward to beyond the mid-line, the whole contents of the triangles down to the great vessels (including the submaxillary salivary gland) are removed in once piece. When the submaxillary gland is lifted from its bed the facial artery comes into view, is ligated and divided. The internal jugular vein may require removal. The carotid vessels are next pulled forward, the sterno-mastoid muscle backward, and the deep chain of glands posterior to the vessels are next dissected out in one piece from the clavicle to the transverse process of the atlas. As the final step in the operation on the neck the hyoglossus is divided and the lingual artery tied and cut between the ligatures.

The wound is now closed, a rubber tube being brought out at the lower end, and no gauze packing being used. Gauze packing, which I used in my earlier cases, frequently sticks to the edges of the skin and acts as a retainer of discharges instead of a drain. The best plan, in my opinion, is to insert one rubber tube at the lower end of the incision and place a sponge or two in the dressing to ensure elastic compression of the large wound and thus prevent oozing. The wound in the neck, having been closed, is covered temporarily with a towel soaked in 1 in 40 carbolic acid to protect it from contamination during the excision of the tongue. This can now be usually performed straight away, being quite a minor and bloodless operation, and occupying only a very few minutes. After the excision of the tongue the gloves are changed, and the dressing is applied to the wound in the neck. If for any reason it be considered prudent to defer the excision of the tongue—though if the operation is performed in this order and in this way it will not often be necessary—it can be done in a fortnight, the blood supply to the primary growth having been cut off in the interval. At this second operation there will likewise be no bleeding, notwithstanding any theoretical considerations about the establishment of collateral circulation.

2. *The growth is confined to the tongue, but crosses or approaches the mid-line (with or without a slight adjacent involvement of the floor of the mouth).* Both anterior and submaxillary triangles will require dissection, and the whole tongue must be excised intraorally. This is a very severe operation, and the surgeon can proceed in two, or exceptionally even three, stages, according to the circumstances and condition of the patient. I have more than once successfully dissected out both anterior and submaxillary triangles, tied both linguals and facials, and subsequently excised the whole tongue intraorally at one sitting. Still, further experience convinces me that the operation is too severe, and as a rule two sittings will be required. I think they are best arranged as follows: At the first operation the triangles upon one side are dissected with ligature of the lingual and facial. A fortnight later a similar operation is performed on the other side and the tongue then excised. Alternatively the neck dissection might be done on both sides at the first sitting, with ligature of both linguals and facials. In one case, however, in which this operation was performed, sloughing of the anterior portion of the tongue followed, though this *contretemps* did not interfere with the patient's recovery. This is the only single accident that has happened in my series of cases of ligature of the lingual. The first plan, therefore, seems the best. If the patient's age or condition involves great anxiety as to how much he will be able to stand, the operation can even be performed in three sittings, a neck dissection on each side separately and a subsequent excision of the tongue.

3. *The floor of the mouth is extensively involved either laterally or in front.* The operation here, I think, requires a median division of the jaw, and should always be done in two stages, exceptionally in three. The first operation, as a rule, will consist in a dissection of both anterior and submaxillary triangles, with ligature of both lingual and facial arteries. In a fortnight, when the wound in the neck is healed (the blood supply to the growth having been cut off in the interval), the lower jaw is divided in the mid-line, and the disease, wherever situated, is widely and bloodlessly excised. The jaw should always be wired, because, though it frequently does not unite by bone, yet the wiring ensures a good position for it subsequently, and in my experience its non-union causes very little inconvenience. A portion of the lower jaw may require removal. Finally a drain tube is carried from the mouth to the lower angle of the wound in the neck and kept in position for about a week. The large wound in the neck caused by the dissection of the triangles a fortnight earlier having healed, there is now no danger of cellulitis in the neck. Three sittings may occasionally be required for excision of the disease in this situation, as exemplified in my last case at the Portsmouth Hospital.

The patient was a feeble old man, said to be 65—he looked 75. The disease occupied the left side of the floor of the mouth and both halves of the tongue. On June 22nd, 1908, the left neck dissection was performed with ligature of the lingual and facial on that side. The patient's condition did not allow of more; the wound healed by first intention. On July 6th the right side was similarly treated, and with the same result. The blood supply to the growth had been cut off. He was not fit for the final operation till July 31st. The lower jaw was divided and the whole tongue and floor of the mouth were excised. No vessel required a ligature. One or two small vessels alone spurted in reflecting the lower lip (inferior dental). He made an uninterrupted recovery.

I am confident the operation could only have been safely done in this piecemeal and bloodless manner.

4. *The disease occupies the tonsil and its neighbourhood—for example, fauces, palate, pharynx, etc.* The consideration of these cases will be very brief, as the present article is not intended to cover them. They will usually have to be dealt with by one or other of the operations of pharyngotomy, and the operation will, I think, have to be performed in one stage, for if the neck dissection is done first anatomical landmarks will be obliterated during the cicatrization of the neck wound, which will make the excision of the primary tumour from without exceedingly difficult and dangerous. I have operated upon three such cases during the past two or three years.

In two of them, in which the disease involved the tonsil and its immediate neighbourhood, the glands of the neck were dissected out and the lingual and facial arteries were ligated close to their origins from the carotid. An incision was then carried up to the angle of the mouth, and the lower jaw was divided opposite the masseter. This gave very good access to the disease, and there was during its removal practically no arterial bleeding and no necessity for laryngotomy or tracheotomy.

In the third case the disease involved the tonsil, soft palate, and the alveolus of both upper and lower jaws, being very extensive within the mouth. As is not very infrequently seen in cases of extensive primary growth, the disease seemed to be expending itself locally, and there was very little glandular enlargement. An attempt was therefore made, at the patient's earnest insistence, to eradicate it. The neck dissection was first performed and the external carotid tied. To lessen the danger of secondary haemorrhage the lingual, facial, and superior thyroid were next ligatured. The growth was exposed in the same way as in the two preceding cases. After median division, the lower jaw on the side of the growth, being involved, was disarticulated, and a large section was also removed of the neighbouring alveolus of the upper jaw, to which the disease had extended. There was no arterial haemorrhage, though the bleeding from the inferior palatine and pharyngeal veins caused a little trouble. This patient made an excellent recovery, and followed his employment as a cabdriver for a year, when he had recurrence *in situ*. There was never any sign of disease in the neck.

In all these cases the disease was removed with scissors, and in all of them the advantage of preliminary ligature of the feeding arteries was manifest. In none of them was laryngotomy or tracheotomy required. In none of them was it possible to close the wound in the pharynx. The same principles as advocated in this article for dealing with cancer of the tongue and floor of the mouth were extended to these cases, except that the operation was in each instance performed at one sitting, involving a communication between the mouth and the large wound in the neck, and thereby greatly increasing its risks. But if a clean dissection of the contents of the triangles is carried out I do not see how this is to be avoided.

Conclusions.

To sum up, the following are the two main principles advocated in the present communication in the operative treatment of cancer of the tongue and floor of the mouth:

The neck should always be attacked first, with ligature of the lingual and facial arteries on one or both sides. This manœuvre reduces the excision of the primary growth, provided that it can be extirpated without division

of the jaw, to an insignificant and bloodless operation, which can consequently be frequently performed without danger immediately after the neck operation. It enables the primary growth to be removed with greater precision. It does away with all necessity for preliminary laryngotomy or tracheotomy. It cuts off the blood supply to the tumour in the interval, if the operation has to be divided into two stages. It will possibly starve cancer cells which may be left behind after attempted extirpation of the disease. In my experience it is the key to the operation.

The second principle is that a communication between *the mouth and a large wound in the neck should always be avoided where possible.* Unless the disease be situated in the tonsil or its neighbourhood, and except the patient insist on a single operation, this can always be accomplished by dividing the operation into two stages in those cases in which for the satisfactory removal of the disease the lower jaw requires division. The neck, as before, is attacked first, and the lingual and facial arteries are tied. When, in a fortnight, the large wound in the neck is healed, the jaw is divided and the primary growth is excised, as before, bloodlessly. In conclusion, as regards final results, early diagnosis is the only hope. With this view, the therapeutic test of cancer, iodide of potassium, should be relegated to the limbo of dangerous playthings. Immediate microscopic examination of a piece of the growth should be the only test, and the therapeutic test should never be employed unless the microscopic report is doubtful. It should then be pushed rapidly, and its effects not watched too long.

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THE SURGERY OF COLITIS.

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BEFORE discussing the present position of the surgery of colitis, it is necessary to have a clear idea as to what the word "colitis" is meant to convey. For the purposes of these remarks, it is intended to include acute and chronic affections of the colon, sigmoid, and rectum produced by catarrh, inflammation, infection, or intestinal irritation.

It is not too much to say that now practically every morbid condition of the large bowel and rectum has been relieved by surgery at one time or another, and although there is not yet, and cannot well be, any decided line drawn as to which cases should receive one or the other treatment, it becomes a daily increasing necessity for the surgeon to be familiar with the causation and pathology of these conditions as well as to have an intimate knowledge of their treatment.

Colitis must be divided first into two large groups, Acute and Chronic, the subacute being merged into the chronic, far the larger group of the two.

ACUTE COLITIS.

For practical purposes it may be said that all cases of acute colitis are infective in origin, which does not mean that all infective cases of colitis are acute.

Mention must be made of those cases which are brought about by exposure to cold, etc. Such hardly come within the scope of this paper, as when uncomplicated they usually get well with ordinary medical measures. But when there is in addition a well-marked condition of oral sepsis which has probably been present for years, a very different state of affairs may supervene.

The large bowel swarms with micro-organisms which in the ordinary way do no harm, but when the membrane is inflamed the resisting power is much diminished, and the streptococci make active use of it, with the result that serious and wholesale destruction of the mucous membrane occurs, and at the same time considerable toxic absorption takes place, producing grave constitutional disturbances.

Symptoms.

These are acute abdominal pain associated with tympanites, diarrhoea, haemorrhage, and the passage of much blood-stained mucus and foul discharge, and in advanced cases sloughs may come away. A marked condition of toxaemia is always present in acute cases.

Treatment.

The surgical treatment in these acute cases does not differ from that which is done in the subacute cases, and the details will be given with the description of the subacute cases. The only point to emphasize here is that the condition is one of great emergency, and as such must be considered in undertaking any operation for its relief.

CHRONIC COLITIS.

The far larger group of chronic cases may be classified as follows:

1. Mucous colitis.
2. Membranous colitis.
3. Ulcerative colitis.
4. Haemorrhagic colitis.

Mucous and membranous colitis are practically the same, as both are due to excessive secretion of mucus.

The excessive secretion is caused by inflammatory irritation of the secreting glands, and when the inflammation is recent and subacute the discharge is entirely mucous, but in the acute cases the mucus is bloodstained.

When the inflammatory area is situated in the rectum or sigmoid the discharge consists of mucus only, but if the affected area is higher up in the colon it will be mixed with the intestinal contents. When the inflammation is of a chronic character, the mucus is secreted more slowly and becomes laminated, forming in some cases a complete cast of the bowel. This is the condition which is known as membranous colitis.

Ulcerative Colitis.

Ulcerative colitis (chronic) is a further stage of the inflammatory process, in which a destruction of tissue has taken place. Four varieties may be considered here, namely:

1. Follicular ulceration.
2. Ulceration due to sepsis.
3. Ulceration due to traumatism.
4. Dysenteric.

Follicular ulceration occurs mainly in the sigmoid and upper part of the rectum, as it is in this part of the intestinal canal that the majority of the solitary follicles exist. They are situated in the mucous membrane itself and the base of the follicle extends to the submucous tissue. The sigmoidoscopic examination shows a number of sharply-cut-out ulcers extending down to the submucous coat, and the mucous membrane around the ulcer is inflamed.

The symptoms mainly consist of a discharge of blood or blood-stained mucus; there is little or no pain associated with it, and the patients are otherwise quite healthy.

This form of ulcerative colitis is not of any serious importance as to the suffering it entails, but it is probably quite as difficult to cure as any of the different forms of colitis.

Ulceration due to sepsis when originally in the colon is due to a microbic infection of an already inflamed mucous membrane, and in ulcerative colitis associated with haemorrhage the organism present is usually a streptococcus. The contents of the large bowel, as has already been said, swarm with micro-organisms which in the ordinary way do not affect the mucous membrane; but when this is inflamed the micro-organisms not only have a destructive action on the inflamed membrane, but, in addition, the absorption of toxins causes constitutional symptoms of more or less gravity.

Traumatic ulcerations apart from ulceration due to post-operative sepsis are almost restricted to women in whom the pressure of the fetal head in a protracted labour has caused absolute destruction of a part of the mucous membrane, which sloughs away, leaving an ulcerated area behind it.

Dysenteric ulceration, as far as symptoms and surgical treatment go, does not differ from the other forms mentioned, except for the fact that the patients have usually resided in tropical countries where dysentery is endemic, and that whilst in these parts they have suffered from symptoms associated with dysentery.

It is rather necessary to put it in this way, because it is only too commonly the custom in tropical countries to class all forms of subacute and chronic diarrhoea as dysenteric, and in military hospitals when the ulceration is discovered as well, it is nearly always diagnosed and treated as syphilitic. With regard to this latter form of ulceration as a cause of colitis, I purposely have not

considered it, as after nearly twenty years of general hospital work and twelve at a special hospital, in addition to general surgery, I am quite ignorant of the existence of this form of ulceration, as I have never seen any single case of it.

Haemorrhagic Colitis.

Haemorrhagic colitis is no doubt another form of the ulcerative type, and the organism responsible is nearly always a streptococcus, but the main symptom—namely, haemorrhage—is so prominent and so urgent that the condition must be treated as an acute one with regard to the immediate treatment required.

In addition to the haemorrhage there is usually a raised temperature, the pulse is running and weak, the patient is markedly anaemic, the abdomen is tender and tympanitic, and the frequent action of the bowels, consisting mostly of blood, are accompanied with much pain and distress to the patient.

When the bowel is examined with the sigmoidoscope the mucous membrane of the rectum and of part of the sigmoid is seen to be intensely injected, and when this condition occurs in a young adult it may be easily mistaken for a malignant growth until examined with the sigmoidoscope.

There is one other condition which may give rise to similar symptoms—namely, when an inflamed appendix situated in the pelvis involves the rectum in its inflammatory process. Here, again, short of opening the abdomen it is almost impossible to make a diagnosis without the sigmoidoscope.

Treatment.

The whole aim of the surgical treatment is to clear out the large bowel as thoroughly, and render the contents as aseptic, as possible. When this has been done for some days, and at the same time oral asepsis has been thoroughly carried out, the inflammatory condition of the colon gradually subsides, and in recent cases the mucous membrane becomes normal, the symptoms disappear, and the patient is cured, but it is most necessary that for some time after every care should be taken in the way of diet, and also over-exertion should be carefully avoided; otherwise the symptoms are sure, in some measure, to return.

The point of paramount importance is to settle as exactly as can be, first, when surgery should come in, and, secondly, what particular thing should be done for each particular case. At present only those cases come to the surgeon which, so to speak, are driven to a surgical port by stress of circumstances. These, as a matter of fact and speaking from experience, do very well in the end, although the period of convalescence may be a matter of months, which, however, is passed without pain and, indeed, in comparative comfort.

The question as to the amount of time which should be spent in medical and expectant treatment in chronic cases is not easy to answer, but it will depend upon the amount of pain which is being endured, the individuality of the patient, and the conservative bias of the medical man.

The disadvantage of this is that no one medical man has, except in quite rare instances, a sufficient number of cases the treatment of which would constitute an experience of any real value. The decision, therefore, of the vast majority of men will be one arrived at through the medium of some one more or less expert. It is a comfort to reflect that the majority of such in this metropolis, at all events, are absolutely broad-minded as to the matter of what is called "surgical interference."

As to when this shall take place in this or that case it must be a matter of evolution, and in accordance to the results which can be shown by those of us who have the surgical treatment of these cases, and so gradually with the spread of knowledge and increase of experience one foresees a vast improvement in the future treatment of these cases of colitis, when the years which are now spent in hopeless treatment will be a thing of the past.

Dealing with *acute* cases, it must be apparent that such a grave condition requires urgent treatment in some thorough and practical form. Half-measures are useless; and, although those about to be advocated may in bad cases be hazardous, it is the only chance and must be taken. The aim of the treatment must be, first, to thoroughly irrigate the large bowel, that the infective material it contains may be reduced to a minimum. It is quite impossible to do this by the ordinary methods of rectal irrigation. It is much too painful, and the patient is much too ill to stand it.

An appendicostomy, when possible, should be undertaken; or if for any reason, such as ahesions, etc., this is not feasible, then caecostomy must be performed, preferably according to the method of Gibson if circumstances permit.

OPERATIVE TREATMENT.

The various kinds of surgical treatment at present carried out are as follows:

1. Appendicostomy.
2. Caecostomy.
3. Colostomy.
4. Proctotomy (median posterior).

To these must be added, either separately or in conjunction with the above, the more recent treatment by means of

5. Cataphoresis.

Appendicostomy.

Appendicostomy is probably, taking it all round, the best operation for those chronic cases of membranous or ulcerative colitis which are at present submitted to the surgeon for operation.

The operation itself presents no difficulties unless there has been much inflammation in the caecal region, when the adhesions may be troublesome. The operation has been frequently described of late, but one or two descriptions which have been published have been so obviously written on insufficient experience that it may be as well to briefly describe the essential details.

The appendix is reached through as small an incision as is compatible with the amount of abdominal fat present, and the appendix is freed of all adhesions and brought outside the abdominal cavity, as much of the meso-appendix being divided as is necessary for the absolute free handling of the appendix; in fact, it is best to free the appendix down to the caecum.

When this has been done and all haemorrhage stopped, the incision of the peritoneum is closed, and in this process the *base* of the appendix is included.

These patients are mostly thin and there is not much depth of abdominal wall to close. The split muscles are united either side of the pulled out appendix, but the skin is for the moment left. The appendix is packed round with gauze, and a point chosen to amputate which would leave *not* more than a quarter of an inch of the appendix outside the skin; the appendix is crushed at this point in the ordinary way to avoid any haemorrhage, and after removal the cut edge is either treated with pure carbolic or with the actual cautery.

The great point of practical importance is to leave as *little of the appendix as possible.*

The cut edge of the appendix is seized with fine forceps and held apart whilst a catheter—rubber—of sufficient size to be tightly gripped by the stump of the appendix is passed into the caecum, a thread ligature is tied round this, and the skin is closed with interrupted stitches, which again include the appendix.

The catheter is now connected with an irrigation apparatus and a solution of warm bicarbonate of soda (100° F.) is allowed to slowly run into the colon. There is no possibility of any leakage occurring if the simple points mentioned already are carried out. To get the solution to pass out freely, and to avoid any over-distension of an attenuated colon, a small Kelly's tube is passed into the rectum; this is a most useful point in the washing out. After from 1 to 3 pints have been passed into the colon the fluid will commence to flow readily through the rectal tube, and the irrigation is carried on on the operation table until the fluid passes out quite clear and odourless. The catheter is then tied up to prevent any back leakage, the wound is dressed, and the patient put to bed.

After-treatment.

If the patient is not too ill from the anaesthetic, the irrigation should be carried on next day, and in any case

no time should be wasted in continuing the irrigation, which should be carried out daily. This can be done without any disturbance of dressings. The wound is looked a on the third or fourth day, when it may be found that the exposed part of the appendix can be removed. The skin suture on either side is divided, and the appendix stump is cleaned with a solution of peroxide.

The irrigation is continued for from three to six weeks, and after the first few days it has been my custom to finish up with some permanganate of potash solution—very weak—which I have found most beneficial. Due care must be paid to the diet, and some intestinal antiseptic should be given.

If the patient is constipated—and they mostly are—some aperient in addition to the irrigation must be given. By this simple method cases of colitis which have been going on for years and have been during that period treated with all varieties of expectant treatment, show in a very short time marked improvement; haemorrhage and pain soon cease, the patients put on flesh, and the pyrexia disappears. At the end of three to six weeks the irrigation is discontinued, but a careful diet is maintained and rest in the horizontal position is insisted on as much as possible. But very gradually the patient is allowed to resume ordinary diet and increased exercise is allowed. A careful watch must be kept over the patients, especially with regard to what is passed from the bowel. During this time and until the colon is normal when viewed with the sigmoidoscope the appendix must be kept open by keeping a plug in during the night. It can be left out during the day, and some simple dressing applied. There is practically no leakage. It may be that it is desirable to prevent the opening from closing for even a year, and if there are any indications of a "set-back" the irrigation must be resumed until these have disappeared. The best results of this treatment are seen in those bad cases of haemorrhagic colitis where the patients are in a most desperate condition from a combination of haemorrhage and toxaemia together. In a few days the haemorrhage ceases, the temperature falls, and the patients lose their blanched colour and gain in weight, and in a short time the action of the bowels is normal.

But in this as in other forms of colitis it is necessary for some time to keep a careful watch over the patient both as to diet, exercise, and exposure to cold.

When it is thought safe to let the opening close, it usually is only necessary to leave out the tube, and if this is not sufficient the edges may be touched with the actual cautery, but it is rarely necessary to do this and most rarely necessary to do any form of plastic operation.

Caecostomy.

This may be termed a bad substitute for appendicostomy, and should never be resorted to if in any way the appendix can be made use of. The details of this operation as performed by Gibson will be found in Tuttle's book; the aim of the operation being to avoid any leakage from the caecum, a result which is highly disastrous to the neighbouring skin as well as most painful to the patient.

Colostomy.

There are many ways described in which this operation may be performed, and the one advocated in my book, *Surgery of the Rectum*, is, I think, on the whole the best. The points about it are that the operation can be done through a small incision, and the great gain is that the bowel can be opened *at once*, and, as in the appendicostomy, irrigation can be proceeded with *at once*.

This operation is of the *greatest* benefit in cases of dysenteric ulceration, where usually the ulceration is limited to the sigmoid and rectum. The affected bowel can be kept quite clean and free from all contact with the intestinal contents, and the ulcerated areas can be treated by the direct application of any lotion which it may be thought will do good. Personally I have not much faith in the curative powers of any of these applications beyond their effect in keeping the colon clean, and as far as possible preventing reinfection. This is probably all that is necessary in those cases in which the ulceration is limited to the surface, and there is no submucous infiltration. When once the ulcerated surface has healed it is well to close the colotomy forthwith that the rectum may resume its natural functions. This will materially help in the prevention of any contraction, any tendency to which must be overcome by the careful passage of bougies.

Posterior Median Proctotomy.

This is of great use in those cases in which the ulceration is low down in the rectum, and the pain is so great that there is much spasm of the sphincters. A posterior incision through both sphincters and extending back to the coccyx relieves the spasm and ensures free drainage, and after a day or two the rectum and sigmoid can be thoroughly irrigated with very little discomfort to the patient. This, associated with warm boric acid sitz baths, soon relieves the patient of the painful and acute symptoms, and the ulcerated surface can after a week or ten days be submitted to the treatment of zinc cataphoresis.

This combination of treatment is of the greatest value in those cases in which the ulceration is limited to the lower part of the sigmoid and the rectum.

Cataphoresis.

This form of treatment was advocated by Dr. Ironside Bruce and myself in a paper read at the Royal Medical Society in June, 1908. For the details of this treatment I would refer my readers to that paper. I have nothing but good to report of the further experience of it, and certainly in *recent* cases the effect is most satisfactory. The effect of a continuance of the treatment in those intractable forms of ulcerative proctitis of some years' standing with submucous infiltration is that the spreading of the ulceration is checked, and in those cases where after years of ulceration the membrane has been damaged beyond repair, a non-infective granular surface is left which can be dealt with by means of excision or some other surgical measure, which when embarked on in the ordinary way is in many cases futile, or even worse, on account of the infective character of the ulceration, and the consequent difficulty of preventing reinfection.

CONCLUSIONS.

To sum up the present position of surgery in the treatment of colitis, it may be said that the sooner all forms of ulcerative and haemorrhagic colitis are submitted to surgical treatment the better. There can be no doubt but that irrigation of the bowel through a surgical hole made in it is the best—one would almost say the only—chance there is of recovery from this condition. Mention has already been made as to the serious condition which exists in acute cases, and the one chance they have, however great the risk, is the free irrigation of the large bowel by one of the surgical measures already suggested.

In either acute or chronic cases the whole aim and object of both medical and surgical treatment is to get the colon free of the infective contents, and thus, by keeping the bowel clean, give it the best chance of recovery.

Any application of a chemical nature, whether stimulant or astringent, must be used with caution, as most such applications are irritant, whatever other properties they possess.

The best treatment for these ulcerated areas is *cataphoresis*, but so far we are only able satisfactorily to treat those cases limited to the lower 7 or 8 in. of the bowel.

As to the efficacy of *vaccines* in either acute or chronic cases, my experience is quite small and limited to chronic cases, in which it seems to have some beneficial effect, although so far it in no way seems curative. From inquiries made, I gather that the present state of our knowledge in this matter is insufficient to make any definite statement either one way or the other.

The form of colitis about which any definite conclusion as to surgical procedure cannot yet be arrived at is membranous colitis. This form is usually met with in women between the ages of 25 and 50; they are nearly always of the neurotic type, imaginative and constipated from habit, and generally before they come for treatment for colitis they have either been treated or have treated themselves for years for constipation, usually by wrong methods, which have had the effect of exaggerating the inflammatory condition of the mucous membrane and increasing the mucous discharge.

Muco-membranous colitis of this type has often been said to be caused by the neurasthenic condition. As to

how far this statement is one of fact is a question which it is not proposed to examine further than to suggest that it maiy be possible that, owing to the constant absorption of toxc products, the various neurasthenic features may be due to the direct effect of these absorbed toxins on the central cerebro-spinal system, and if this is so it would seem obvious that any measure which quickly and thoroughly cleans the colon of its harmful products must be the most desirable.

Without discussing the various treatments by means of lavage, diet, waters, exercises, and intestinal antiseptics which are carried out in this country, at Plombières, and elsewhere, with marked success in many cases, there remain a large number of cases which, either from neglect or in spite of treatment, are in a miserable condition of chronic ill-health, which no amount of treatment can do much to alleviate. It is for such cases that I would suggest a much earlier resort to surgery. It does not appear to be possible to clear the colon of its contents by the ordinary methods of lavage; besides which the process, if carried out effectively, is distinctly an exhausting affair, especially having regard to the enfeebled state of the individual concerned. When once the operation of appendicostomy has been performed the process of washing out the colon is one which is easily carried out with the smallest amount of discomfort to the patient, and with a rapid disappearance of the amount of membrane and great amelioration of the symptoms, such as pain, flatulence, etc. The constipation is not so easily overcome, but there is distinct improvement in this respect, and the appetite is greatly improved, the weight increases, and with the improved physique the recuperative powers are increased, and with a continuance of the treatment, with due regard to diet, and with as perfect hygienic surroundings as possible, there is no reason why these people should not get well; but the treatment may take many months—even a year—before the patient is able to discontinue it and allow the opening to close.

In some—nay, in most—cases the patients bear the treatment with equanimity because of the greatly increased comfort they derive from it.

There is not any necessity for these people to stay in hospitals or nursing homes longer than two or three weeks, as for the purpose of carrying out the treatment the patient can soon learn to do this with any slight help from some member of the family or a servant.

Perhaps the most important thing in diagnosis in reference to treatment is the early examination by the sigmoidoscope.

There is no doubt that much may be learned from such an examination and a great deal of time saved, and I would strongly urge that this should be done quite early. The state of the bowel wall can be made out and specimens of pus or secretion can be obtained for microscopical examination or for bacterial investigation; the extent and depth of any ulceration can be made out and the question of any growth can be settled. With the sigmoidoscope for diagnosis and the various surgical methods which have been described much can now be done to relieve the various forms of colitis. The important question is whether these surgical measures should not be resorted to much earlier and more frequently than is now the custom.

THE University of Leipzig will celebrate the 500th anniversary of its foundation in August, 1909.

THE will of the late Dame Frances Russell Reynolds directs that a sum of £1,000 shall be paid to the National Hospital for the Paralysed and Epileptic for the maintenance of a bed in memory of her husband, the late Sir Russell Reynolds.

IT is apparent from a paper read by Mr. Berry at the Scottish Institute of Brewing on "The Condition and Head on Beer," that the public demand for a beer with an attractive "head" is more exacting than it was some years ago. In consequence, many brewers now resorted to carbonating beers. In the days of the East India pale ale, when much higher alcoholic beers were in vogue, the production of an attractive and lasting "head" did not present the same difficulties as the present day. Science has now come to the aid of the brewer, and by careful and judicious malting, methods could be employed that would produce, even on low alcoholic beers, a head and conditions of surpassing attractiveness.

THE TREATMENT OF CHRONIC RHEUMATIC AND RHEUMATOID ARTHRITIS BY RADIANT HEAT AND CATAPHORESIS.

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IT appears reasonable in the present state of knowledge of the pathology of the conditions included under the terms "chronic rheumatic arthritis" and "rheumatoid arthritis" to accept, for purposes of treatment, the view that they are inflammatory affections of a progressive character, probably caused by toxins elaborated by micro organisms; also, that the micro-organisms or micro-organism in question may have their habitat in the joints affected, or may dwell elsewhere (perhaps in the naso-pharynx, perhaps in some portion of the alimentary tract); also, that circumstances which depress the general or local circulation, allowing the blood to more or less stagnate in the structures which form the joints (and the circulation is normally comparatively slow in these structures), act as strong predisposing causes; that, of these depressing circumstances, one of the most important is continued exposure to cold and wet, or both combined, others are insufficient nutrition and mental shock; and that another predisposing cause may be repeated slight traumatisms, for it always appears from the history that the joints which have been exposed to the greatest wear and tear are usually the first to succumb.

Unless we start with some such definite, although perhaps hypothetical, view of the pathology of the affections, treatment tends to be empirical. Assuming, therefore, that the above microbic theory is correct, the value of improving nutrition by generous diet, cod-liver oil, and fats is manifest, as also the prescription of drugs empirically found to produce a good effect—and all being more or less antibacterial, such as iodides, arsenic, quinine, and guaiacol—and more especially the removal of our patient from the influence of the predisposing causes.

The comparative want of success in one portion of our treatment lies in the fact that, although we may give drugs as remedies in large doses and for long periods, yet the actual amount at any time of any drug circulating slowly in the joint tissues is in reality quite small, and, therefore, the beneficial effect is proportionate. To increase the latter the treatment by radiant heat and cataphoresis may assist us materially.

The action of heat in relieving pain and exerting some control in checking these diseases has always been recognized in chronic rheumatic and rheumatoid arthritis; local treatment has comprised hot poultices, compresses, volcanic-mud and moor-mud baths, vapour and hot sand baths, and so on, but the most efficacious of all heat applications is dry radiant heat. Until recently the radiant heat appliances supplied have usually been box-like, the distance of the radiant surface from the joint could not be regulated, and they were often covered in with asbestos sheeting, and thus imperfectly ventilated. In consequence we may have, combined with radiant heat, a condition to be avoided, namely, "moist air heat." They have a more important defect in that, as the radiant surfaces are made of ordinary low candle-power electric carbon filament lamps, they give out rays consisting almost solely of the yellow and yellow-orange. Now the ideal type of radiant heat should be as nearly as possible like sunlight and should give a spectrum ranging from the ultra-red to the ultra-violet. This type of spectrum can apparently be only obtained from lamps of very high candle-power. I am quite convinced that an absence of the violet and ultra-violet rays in the ordinary apparatus is largely responsible for the weakness of sedative effect and slow relief of pain, whereas absence of yellow-green rays may be responsible for only slight stimulation of metabolism.

I find a type of radiant heat apparatus, manufactured and largely used in America,* very satisfactory. It consists of a single large lamp in a funnel-shaped projector lined with a reflecting surface. The projector may be raised or lowered by a system of counter-weights, or

* Obtained for me by Mr. A. E. Dean.

turned in any direction with one hand; the rays can be directed easily and rapidly on any part, and the maximum amount of heat the patient can bear can be adjusted to a nicety. The lamp is very large, with a thick filament, requiring and using up as much current as twenty-four 32-c.p. ordinary lamps. Twenty-four 32-c.p. lamps give out altogether a light equal to 768 candles, consisting almost entirely of yellow and orange rays; the large lamp has a luminosity of only 500 candles; the remaining electric energy, equal to 268 candles, is used up in producing heat rays and the other rays of the spectrum, which, as I have said, are of the greatest value in therapeutic effect. With this apparatus a temperature of 400° F. is obtained, and, as it is a perfectly dry heat, can be endured with fair comfort and without damage to the skin. By the use of coloured glass screens, only red, yellow, or violet rays can, if desired, be used.

The general result of radiant heat exposure for any length of time is that the cutaneous and deeper vessels are dilated, the lymphatics are filled, the local arterial pressure is diminished, and local metabolic processes are increased.

The effects do not pass off at once, and after repeated exposures they become more or less permanent. Besides their influence on the tissues, the rays also exert an effect on micro-organisms, and in addition increase leucocytosis. Thus the condition of circulation and tissue-metabolism in a joint, during and after twenty minutes' exposure to intense radiant heat, is pathologically altogether different from its state before that exposure. The most noticeable result, to the patient, of this altered condition, as a rule, is a rapid total removal or extreme alleviation of pain; probably, the ultra-violet rays, by their anaesthetic action, may be to some extent responsible for this change.

The recent adoption of local ionization as a means of treatment of various diseases has suggested the immediate following up of radiant heat treatment by ionization or cataphoresis with an iodide or salicylate solution. It is an accepted fact that, when a constant current passes through any portion of the body from electrodes soaked with a 2 per cent. solution of any salt (such as lithium iodide or sodium salicylate, for instance), the basic radicle of the salt travels into the tissues from the positive electrode in a more or less direct line towards the negative electrode, whilst the acid radicle leaves the negative pole, enters the tissues, and travels towards the positive electrode in the same direct manner. The quantity of the basic or acid radicle entering is proportional to the current passing, and although the amount flowing in at any period may be comparatively small, yet, if a current of 2 milliampères per square centimetre is continued for 20 minutes, using large electrodes or a bath of solution, the amount of lithium or iodine entering the tissues in a "nascent" and so very active state, is appreciable. It is probable also that the general migration of all kinds of ions, which takes place along the course of the current, may produce an effect of commotion in and stimulation of the tissues, which is beneficial.

The joints I have treated, as a rule, undergo twenty minutes' exposure to the radiant heat projector at such a distance (the patient often regulating this) that as much heat is applied as can be tolerated. During the sitting the patient moves the joint into different positions, turns it from side to side, and gently rubs the skin with the hand to allay the burning sensation, which passes off fairly rapidly, and is followed, as the heat penetrates the joint, by a sense of comfort and relief from pain, if previously present. When, at the end of twenty minutes, the lamp is switched off, the joint feels burning hot to the touch, and the surface is red and mottled from vascular dilatation.

Directly the radiant heat sitting terminates, cataphoresis with iodine "ions" immediately follows; in some cases, however, lithium "ions" seem more efficacious and are used instead. If a wrist is to be treated, it is immersed in an arm-bath containing 2 per cent. lithium iodide solution, and either a large indifferent pad is placed on the back or the other hand is immersed in another arm-bath, ammonium chloride or common salt solution being used for the indifferent pad or bath. If both wrists are affected, I generally ionize one wrist with iodine ions and the other with lithium ions, two arm-baths containing lithium iodide solutions being used, a wrist placed in each and the current driven from one bath to the other. Where the knee is treated it is packed round with four thicknesses of lint soaked in lithium iodide solution; the lint is in turn surrounded with flexible copper gauze electrodes or by a copper chain-armour electrode; the foot is placed in a bath of sodium chloride solution, for the indifferent electrode. Where one uses baths for feet and hands, large carbon electrodes which are not acted upon by ions are the best, but for knees and elbows one has to use copper electrodes. Any other joint can be treated in a similar manner, but, naturally, the deeper the affected structure from the surface the less is the treatment applicable.

It is necessary to work with large currents; a battery is not suitable to maintain the constant current; one cannot obtain 30 to 70 milliampères from a battery for long enough even when it is very large and cumbrous. A switch-board, worked from the town electric supply, is perfectly satisfactory, as it enables one to obtain and to regulate to a nicety the amount of current one requires and the patient can bear without pain.

I attach extreme importance to the continuance of drugs by the mouth during the combined treatment, and believe that much less benefit is derived if they are stopped. In my opinion, one great value of cataphoresis is that it causes acid or basic radicles, in a so-called "nascent" state, to be formed in the path of the flow of the constant electric current. Drugs such as iodine preparations or soluble guaiacol salts lying in or circulating through the joint tissues—should the patient have been taking them for some time and in fair quantities—are broken up by the current and locked up in the joint tissues temporarily, instead of being carried through the blood vessels and excreted. Besides, "nascent" ions generally are in all probability much more actively bactericidal and much more energetic than when they combine into soluble non-ionized salts.

I give two examples of cases treated with good results. The number of patients I have had under treatment is naturally small, but all considered themselves improved, and where the pain was a prominent feature relief was well marked. Whether any cases are permanently cured is a matter that only time can show.

Case I.

Mr. B., aged 48. No family history of gout or rheumatism. Has led a steady life, always athletic, has played much tennis and golf; always in comfortable circumstances, no business or other worries. Has lived in a tropical moist climate for the most part of thirty years, and developed his rheumatic attacks there; they are always very bad of late during the "monsoons," and he has been confined to bed or only able to hobble about during these attacks. Is much better directly he gets home to England. Condition diagnosed as "rheumatoid arthritis" by doctors abroad, as "chronic rheumatoid arthritis" by the London physician who sent him to me.

Present Condition.

Pain and difficulty in moving about, especially in getting downstairs, in both knees and both ankles. Other joints not painful. Cannot walk for any distance without considerable pain. Grating and creaking very marked in both knees and ankles on passive movement; thickening and puffiness of these oints. Heart and other organs normal.

Treatment.

Radiant heat ten minutes to knee, ten minutes to ankle, followed by cataphoresis for twenty minutes with lithium iodide 2 per cent. solution, 70 milliampères run between knee and ankle. The right leg had the first treatment; the next day he said the "right leg felt fit for anything, while the left was, of course, the same, and that there was a marked difference between the two, whereas both had been pretty equally bad before." The second treatment was to the left leg, and this made both legs equally comfortable. He continued alternate treatments to right and left legs, and after the tenth was playing golf without ill effect. The grating of the joints has disappeared; he has no pain whatever.

Case II.

Mrs. A., aged about 35, married, always in excellent circumstances. Family history of gout. The patient had had no rheumatism before present illness, no sore throats. Health always robust, fond of games, played golf until onset of this attack. Has spent much time gardening, her hands being frequently wet and cold. Has lived in a low-lying town which has a very damp subsoil. Rheumatoid arthritis commenced twelve months ago in the proximal interphalangeal joint of the left ring finger; during the first six months it attacked the carpal, carpo-metacarpal, and radio-carpal joints of the right hand, and eventually the left wrist in a similar manner. She was advised to come to Brighton, and forbidden by her London physician to return to her former dwelling. She was placed on

iodides, arsenic, guaiacol, aspirin at various times without much benefit. One feature of her case was the severe paroxysmal pain that came on in the wrists about 3 a.m. and continued till 6 a.m. Radiant heat to the wrists for twenty minutes, followed by twenty minutes lithium iodide 2 per cent. cataphoresis. After the second treatment she had no more night attacks, after suffering from them for three months. She gradually improved very considerably. The pain left her absolutely; the puffiness and swelling of the wrists diminished greatly; she regained power of using her hands for ordinary purposes, but they are still weak.

THE RESTORATION OF VISION IN THE SQUINTING EYE.

BY A. ALISON BRADBURNE, F.R.C.S.ED.,

OPHTHALMIC SURGEON, ORMSKIRK HOSPITAL AND DISPENSARY; OCULIST, SOUTHPORT EDUCATION BOARD.

DURING the past ten years the treatment of squint has made great strides. Formerly glasses alone were prescribed; then supervened the period of promiscuous tenotomies which by their untoward results produced the natural effect of setting back the operative clock until the time had passed for obtaining the best results.

Thanks to the able and painstaking researches of Worth, a scientific line of treatment was evolved out of the chaotic conditions into which matters had got. He showed that a defective cerebral function—named by him the fusion faculty—had a great deal to do with the development of a squint, and that to cure it this faculty required cultivation. Thus it has come to be generally recognized that the presence of a squint is but one sign of other defects, and that the restoration of the normal alignment of the eyes is but a portion of the treatment which a squint requires.

The presence of a squint, in addition to its outward manifestation, nearly always indicates (1) some error of refraction, (2) a defect in the fusion sense, (3) a defect in the vision of the squinting eye, which varies with the age of onset and duration. Therefore the scientific rectification of strabismus includes measures to correct the above. Glasses correct the refractive error, orthoptic exercises or operation remedy the faulty position, training with the amblyoscope overcomes the cerebral defect, and at the same time certain measures can be adopted in some early cases for restoring the defective vision.

Up to the present time we can only completely cure a squint if we get it quite early in life, before a habit of using only the straight eye has resulted in blindness from non-use—amblyopia ex anopsia—in the squinting eye. The limit of age at which such restoration can be accomplished is held to be six years. That such is the fact in the majority there is unfortunately very little doubt, yet that there are exceptions and that such exceptions may perhaps some day prove to be commoner than is at present thought to be the case I think the circumstance I have to report will prove. Excepting congenital cases of blindness in one eye, what right have we to assume that restoration of useful vision cannot be obtained in an organ which as far as we know once performed its full share of duties? If we fail to obtain its restoration of function surely it is more logical to attribute the non-success to the methods adopted than to the materials on which we have to work.

Holding such views, I have for a long time been seeking a method for obtaining what up to the present has been considered impossible of accomplishment, and though at present one cannot produce any very great results, what one has obtained more than justify one in persevering along the same lines.

Worth's amblyoscope was invented by him to overcome the defect in the fusion faculty, by training the brain to recognize the presence of the two pictures which the possession of two eyes affords. Briefly, the method consists in putting before the eyes two pictures, and by increasing the illumination in front of the eye with the defective vision and decreasing that in front of the better (or more used) eye a simultaneous recognition of *both* is obtained on the brain. Eventually both pictures are recognized under equal illumination and by mechanical means they are superimposed until by degrees they are blended by the brain into one true picture appreciative of depth and perspective. This amounts to the restoration of what for want of a better term I call "landscape vision," and can be accomplished in a fair number of cases in which amblyopia ex anopsia blindness from non-use has supervened in one eye.

But of what practical use is this "landscape vision" to the patient who in after-life will desire to read, write, or sew with the amblyopic eye? If injury, or operation, or disease supervene in the straight or seeing eye the value of the originally squinting eye will be very little if it cannot be of use in such pursuits. Hence it is obvious that before we can assert we can *cure* a squint in the fullest sense of the word we must be able to restore to the eye and brain the power to recognize *letters and figures*. Up to 6 years of age this can be accomplished by the methods so ably laid down by Worth; after this age we must seek other methods. How far this restoration can be accomplished and in what percentage of cases, it is impossible just at present to say, but of this fact there is no doubt that there are a large number of patients with a squint in whom the amblyopia is only latent, and in whom the full, or a very great, restoration of useful vision can be obtained. It has been clearly proved that to leave a squint to be grown out of or until the child is old enough to be operated on is unjust and unscientific, also that the proper course is to adopt amblyoscopic and training exercises as promptly as possible. So now it is just as unscientific to put on one side all attempts to teach the eye to read simply because up to the present no success has attended the efforts made to restore vision in an amblyopic eye. There are cases which are not successful and others which yield gratifying results, and it is impossible, without investigation, to distinguish the two.

The investigation of any case of squint should always include an examination as to presence of the fusion faculty, and in those cases in which it cannot be developed we should not conclude that the monocular visual perceptive centre is incapable of being awakened. If we cannot obtain a blending of the two images, we ought to endeavour to obtain recognition of either picture and then proceed to smaller and smaller objects until printed type can be recognized; in fact, it is not necessary in every case to obtain fusion, it frequently being advisable to use a prism base up before one eye so as to obtain diplopia, and by this means cultivate each visual centre in the brain. We can go further with the use of prisms, and cultivate those other inert portions of the retina in cases where a false macula has become developed, the indications for such developing as the case proceeds.

The case I have to report is as follows:

A youth, aged 11 years, began when about 2 years of age to squint with the right eye, which turned in. Teething was supposed to be the cause. There was no history of any relation having squinted. He was seen by an ophthalmic surgeon at 4 years of age, was given in the right eye $\frac{+ .05 \text{ D. sph.}}{+ .05 \text{ D. cyl. ax. } 180}$ and in the left + 1 D. sph. Apparently no attempt was made to test him as to the presence of the fusion sense. He wore the glasses constantly, and was told that the case was proceeding so satisfactorily that in a few years' time he would be able to do without them. The patient was an exceptionally brilliant boy, and at school had taken all his class prizes and had not missed a single day's attendance.

He was brought to me in November, 1907. His right eye turned in about 8°, fixation was possible but slow; the left eye was used in both near and far vision. He was wearing the glasses mentioned, and with them the vision in the left eye was $\frac{6}{5}$, whilst in the right it was only $\frac{6}{36}$ with or without glasses. Tests with the amblyoscope showed there was deficient perception to pictures in the right eye; but after half an hour's graduation of the illumination recognition of both pictures was obtained, and this was quickly followed by blending.

When seen on December 11th the vision in the right eye was two letters of $\frac{6}{24}$, and with the amblyoscope true fusion was elicited. In place of the amblyoscopic pictures a set of type-printed letters on transparent sheets of celluloid was inserted. These sheets of printed letters contained two-sized type, the larger being equal to letters readable at 9 feet, and the smaller equal to Jaeger No. IV.; these sizes alternated with each other. It was found he could slowly make out the larger letters, but skipped the intervening smaller ones. He was instructed to cover his left eye with his hand when doing his lessons and endeavour to teach his blind eye its letters. At the same time his parents—who most ably co-operated in my endeavours—at my suggestion bought him an alphabet set of letters on pieces of card, with which he built up words with his left eye and then endeavoured to interpret them with the right eye.

December 19th. Fusion exercises of both pictures and type were carried out, and it was found that as the tube in front of the right eye was moved in the direction which brought the letters over the outer portion o the retina they became

suppressed; by therefore adjusting the tube this portion of the retina was exercised.

December 24th. On this date the vision in the right eye had improved to $\frac{6}{18}$, and the ability to take up and maintain fixation was greatly improved.

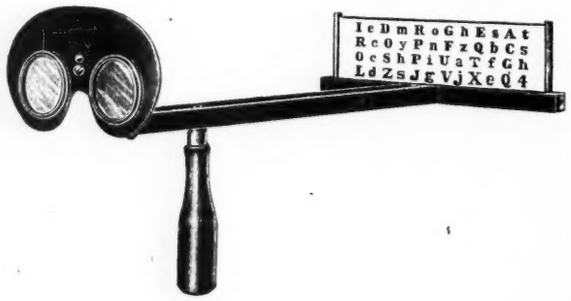
He was seen once a week, and at each visit exercises were carried out with the pictures and the letters, and by degrees the ability to maintain fusion was cultivated, until he could read type equal to J. 8 and J. 4. For nearly two months very little progress beyond this stage was obtained, and during the time atropine had been used in the fixing eye—the left; this was supplemented by a total-exclusion pad, whilst at the same time he did all his school work with the right eye.

March 20th. Vision in the right eye equal $\frac{6}{9}$ without glasses, and $\frac{6}{6}$ partly with the glasses, but by the end of April he got four letters of $\frac{6}{6}$ vision. During the last six weeks of this period exercises with a 6° prism, base down, had been instituted, and after painstaking efforts we obtained double vision, this being aided by dark glasses at first in front of the left eye.

At the beginning of May the vision in the right eye had risen to four letters of $\frac{6}{6}$ and the shade was removed from the right eye. The removal of the shade, it was feared, would cause the left eye to take up the work of seeing again, but instead the vision of the right eye continued to improve, and when seen last the patient read without his glasses $\frac{6}{6}$ and Jaeger I.

The convergence of the right eye is now all that remains to be removed, and when this is done the condition will be such that he can put his glasses on one side and the vision in both eyes will be equal, his ability to read or write normal, his fusion sense fully developed; in fact, a complete cure will have been accomplished.

This patient, in that he was exceptionally bright mentally, in that there was not much refractive error or any great difference in the refraction of the two eyes, was a particularly suitable subject and justified one in the hope expressed that the lost vision could be restored. But judging by others, far less suitable cases, which have



proved as far as they have gone capable of great improvement, there seems good reasons for hoping that after all we may be able to remove the last stumbling-block which remains in the treatment of squint.

During the course of exercises with the printed type a very interesting feature showed itself. By some authorities it is held that a certain portion of the brain controls a horizontal section of the centre of the visual field. Now, as this case improved it was noted that the lines of letters running across the centre of the visual field were the earliest to become recognized, the lines in the upper and lower parts of the field of the same size type developing later. In the stages of development it was noted that the intermediate letters were not seen, every alternate letter, no matter its size, being recognized. As improvement took place this skipping of letters became less and less in the horizontal line in the visual field, whilst it still remained in the upper and lower fields. This interesting feature, I think, confirms the theory of the function of the cerebral visual centre, and, moreover, tends to show that these cases of acquired amblyopia are due to a cerebral and only partly a retinal defect.

The accompanying illustration is that of an instrument which Messrs. Armstrong, of Deansgate, Manchester, and Bold Street, Liverpool, have brought out for me. It consists of a series of cards and a holder, and is intended to be used at home by the patient. On each card are printed letters in two sizes, so arranged that a small and large letter alternate. Each card has progressively a smaller size of type, the smallest being composed of 5-point type. When the instrument is held by the handle in front of the face, the two prisms opposite the eyes produce a vertical separation of the image of the card held at the far end of the instrument. Thus, in normal eyes an image of the card is presented to each eye. In the case of a patient who has by non-use forgotten how to use one eye the card belonging to the amblyopic eye will only show the large letters; the intervening smaller letter will be unrecognized. To elucidate this feature the normal eye must be covered and the patient asked to read the letters he sees. When the correct card is in position the patient will "stutter" over the smaller type. Under such circumstances the other should be momentarily uncovered, by which means he will recognize the letter correctly. Then on re-covering this eye the patient should endeavour to see the letter by his amblyopic eye. Such recognition will not be instantaneous nor for some time permanent. The patient has to teach his receptive perception centre to remember the letter just as he teaches and cultivates his "memory" for pictures, poetry, prose, history, dates, etc. As soon as one card is mastered the next smaller is similarly dealt with until they all are mastered. When one endeavours to train an amblyopic eye by means of a single picture of letters any mistakes in naming of letters has to be corrected by word of mouth, that is, the patient learns the nature of the image presented to his brain by means of the auditory channels. With my instrument he learns by means of the optic nerves and visual centres, which seems a sounder and more rational method. The use of this instrument, in addition to enabling the patient to practise at home, enables the trainer when the patient comes for the other lessons to examine by means of the card for evidence of progress and for proofs of attendance to one's injunctions regarding the carrying out of the exercises at home.

PERSISTENT THYMUS AND SUDDEN DEATH.

By SIDNEY HERBERT DAUKES, M.B., B.C.CANTAB.,

BECKENHAM

THERE is no greater check to the progress of therapeutic knowledge than that which comes from a too ready acceptance of the value of a remedy because in an isolated instance that remedy has seemed to be successful. Remembering that this applies also to many other instances of cause and effect, I submit this case, which I consider of interest not only to the medical but also to the legal mind, with a full realization of the possibility that I have overestimated the importance of the local condition.

At midnight on July 25th I was called to a case of supposed murder. The history I will relate as nearly as possible from the evidence placed before the magistrates, and subsequently before Mr. Justice Ridley at the Maidstone Assizes.

Late on the evening of July 25th a man named H. entered the room where his children slept. Finding that his wife was out he was heard by a neighbour living in an adjoining room to mutter threats against the absent woman. Subsequently the latter entered the house and a scuffle occurred in the passage, but no sounds were heard betokening blows or in any way significant of extreme violence. A few seconds later Mrs. H. rushed out in a state of extreme terror. She tried to get into a house opposite, but failed as the door was shut. She then ran down the road with her husband in pursuit, about four yards behind. Suddenly she seemed to collapse; her legs gave way, and she fell to the ground "like a dead thing." All witnesses are agreed upon this point—it was not a stumble, she was not touched by anybody, she fell, as another witness put it—"all of a heap," and never moved or uttered a sound again. Her husband, who had been drinking heavily, rushed up, and, using a violent threat. told her to get up. As she did not move he is said to have kicked her "in the left side." Three women bear witness to this fact, whilst a fourth witness denies that any kick was given. A point which seems to have struck many who heard the evidence, and one which fixed itself in my mind with overwhelming force, was that the woman was dead when she fell, and that, if her husband did kick, he kicked her dead body. The body was then carried indoors, and it was there that I first saw it.

A careful external examination of the body revealed only one mark of any importance—namely, a bruise on the extensor surface of the left forearm. It might have been caused by the fall or it might have been the result of the

kick; in either case I consider that it was inflicted after death. There was no bleeding from ears, nose, or mouth, and no orbital haemorrhage. The necropsy took place eighteen hours after death, and, needless to say, was done with extreme care.

Necropsy.

The body is that of a well-nourished and apparently healthy woman. Rigor mortis well marked. Recent bruise on extensor surface of the left forearm; old burn on dorsum of right hand; old scratch on dorsum of left hand; small bruise on ulnar surface of right forearm; old scar over right breast. Hypostasis well marked. Signs of incipient putrefaction in right iliac region and round umbilicus. No injury to scalp or face. No blood in ears, mouth, or nose. Mouth and throat normal. No glandular enlargement.

Skull.—No sign of fracture. Meninges normal. No meningeal haemorrhage. Cerebrum, cerebellum, pons, and medulla normal. No signs of concussion.

Thorax.—On removing sternum the great vessels and upper part of pericardium were found to be covered by a thymus gland 2¾ in. long, 2 in. wide, and weighing 1¾ oz. Pericardial and pleural cavities normal; no adhesions and no haemorrhage. Heart—muscle healthy, valves healthy; weight, 8½ oz. Aorta and great vessels, normal. Lungs, normal.

Abdomen.—Peritoneal cavity, normal; no haemorrhage. Liver, normal, 64 oz. Spleen, normal, no rupture, 6½ oz. Pancreas, normal. Kidneys, normal; capsules strip readily. Suprarenals, normal. Uterus and appendages, normal; not menstruating. Bladder, normal. Stomach, no disease; contained half-digested food. Intestines, lymphoid tissue seemed to be rather prominent, otherwise normal.

This autopsy well agreed with the past history of the woman, who seems to have been exceptionally healthy. She had two children, both healthy.

The only conclusion which I could come to, having heard all the evidence, was that the woman died from excitement, mental and physical, causing heart failure; the persistent thymus being in some way a predisposing factor.

The thymus gland seems to reach its maximum size at two years, at which time its weight is about 200 grains (400 grains would be an exceptional weight). The gland generally maintains its size from the second to the eighth year, from which time it gradually atrophies, becoming practically non-existent by the time adult life is reached.

For some time the association between an abnormal persistence of this gland and sudden death, induced by trivial causes, has been recognized. Cases are reported by Fowler of death during the administration of a hypodermic injection, death during an examination with the aid of a spatula death during light anaesthesia, death during bathing, and death from a superficial burn by a hot-water bottle. In all of the cases mentioned a persistent thymus was found.

In the case which I report an emotion—namely, fear, together with some physical exertion—seems to have determined the fatal result, without any actual violence.

How the gland can have such an adverse influence upon an otherwise healthy body is difficult to conceive.

It is easy to theorize upon the subject; to give an anatomical explanation and say that the close relationship of the gland to the trachea, vagi, and great vessels, affords a clue to the situation; or, again, to give a physiological explanation and say that an internal secretion, which produces a sudden fall of blood pressure, is the determining factor.

A mechanical explanation seems totally inadequate in such a case as I have recorded; and should the persistence of the gland be a danger to those who are its unfortunate possessors, I am inclined to think that the explanation is more likely to be found in the physiology, than in the anatomy, of the gland.

I have been told by an eminent authority on anatomy that the condition of persistent thymus is not altogether uncommon in the female sex. It does not seem to me, however, that this fact in any way negatives the possibility of its malign action in certain cases. In one way it lends support to the idea, as these rather obscure cases of sudden death are far more common in women than in men. Mitral stenosis is a common defect, but it is only in a small proportion of cases that it leads to sudden death.

In conclusion, whatever cause may be allotted to the case in question, I think that the subject of sudden death associated with persistence of the thymus gland—quite apart from the condition known as status lymphaticus—is worthy of the attention of those skilled in medical jurisprudence.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TRAUMATIC RUPTURE OF SPLEEN.

E. V., aged 11, was admitted into the South Devon and East Cornwall Hospital, Plymouth, at 10 p.m. on June 22nd, with a history of having jumped from a ow wall ten hours previously, missed his footing, and fallen with his belly on a large stone placed across the gutter in a country road.

He appeared in considerable pain, and his abdomen was very hard and rigid, so that nothing could be made out by palpation. There was a superficial abrasion over the left hypochondrium. The pulse was 120, rapid and running; temperature 98°. There was slight dullness in the left flank.

Twelve hours after the accident I opened the abdomen in the middle line above the umbilicus, when some dark liquid blood escaped, and on exploring with the fingers in the splenic region blood could be felt flowing. The left rectus was divided transversely half-way across, to give more room, and the spleen was brought up without much difficulty. It was torn nearly across, its whole surface lacerated, so that suturing or plugging appeared equally futile; it was bleeding freely. The pedicle was clamped, the organ cut away, and the stump transfixed and ligatured. The effused blood was rapidly removed, as far as possible, and the wound closed. No injury to other organs was apparent.

The boy recovered satisfactorily and went out in a month. A blood count by Dr. Pethybridge on his departure showed: Reds 5,200,000, whites 7,400, haemoglobin 70 per cent. I saw him a week or so ago—quite well, to all appearance.

The point of interest was the very little on which to base a diagnosis—practically only the skin abrasion and the slight dullness. He complained of general abdominal pain, and, though the spleen was thought to have been ruptured, the abdominal rigidity only permitted some "catastrophe" to be inferred with absolute certainty. Delay in operation might have been followed by a different result, as the haemorrhage must have gone on steadily.

C. E. RUSSEL RENDLE, F.R.C.S.Edin.,
Assistant Surgeon, South Devon and East Cornwall Hospital.

EUCAIN AND ADRENALIN AS AN ADJUNCT TO GENERAL ANAESTHESIA IN OPERATIONS FOR HAEMORRHOIDS.

THE necessity for complete relaxation of the sphincter in these cases requires the administration of general anaesthetics to a dangerous degree, and demands very constant watchfulness on the part of the anaesthetist, in order to maintain this condition during the whole period of the operation. To paralyse the sphincter without rupturing some of its fibres entails a good deal of force and some judgement. Without an anaesthetist who has had a good deal of experience in this variety of operation, much embarrassment to the operator may occur, owing to the contraction of the sphincter preventing a clear exposure of the area of operation, especially if the requisite dilatation of this muscle has not been procured.

In doing some operations for interno-external piles under eucain I noticed the great ease with which the sphincter could be dilated, and that it remained quite patulous during the operation. It occurred to me that the use of this drug would be of great assistance if combined with general anaesthesia, and I have lately tried it; 10 c.cm. of Barker's solution is injected into the external sphincter on each side of the median raphe, the needle being inserted in the middle line and pushed into the muscle in an outward direction. This is done fifteen minutes before the general anaesthetic is commenced, and by the time the patient is under, the sphincter will be found quite paralysed. It has been found possible to complete the operation under very light anaesthesia—such a degree, in fact, as would be quite useless without previous injection of eucain and adrenalin.

I have been much struck by the comparative absence of pain after the operation—due, I presume, to absence of bruising and tearing of the sphincter. The lessened amount of anaesthetic which is inhaled by the patient

must also contribute to a more rapid return to his normal condition and lessen the anxiety which must occur to both operator and anaesthetist, especially when dealing with private patients.

F. J. W. PORTER, Major, R.A.M.C.

Colchester.

POISONING BY CYLLIN IN AN INFANT.

ON August 21st, 1908, an infant of 13 months was admitted into Wrexham Infirmary, having drunk, about twenty minutes before admission, a certain quantity of cyllin. The exact amount taken is unknown, but, according to the infant's mother, it was not much. The mother had been using it for disinfecting some articles used by her husband, who had just been removed from the house with typhoid fever, and, having left the bottle of cyllin on the chair, the child had got hold of it when her back was turned.

On admission the infant was quite unconscious, both conjunctival reflexes absent, the pupils equal, but slightly dilated. There was a strong odour of cyllin in the breath and slight corrosion of the lips. The face was very pallid. Voluntary movements were absent. Apomorphine $\frac{1}{20}$ grain was injected hypodermically, and the stomach tube introduced. The stomach was washed out with warm water. The tube being withdrawn, the infant vomited; the vomited matter looked like undigested food, but smelling strongly of cyllin. The respirations became very slow, cyanosis became very marked, both lips and ears being quite livid. Simultaneously the pulse was becoming feebler and more irregular, till almost impalpable. The respirations had almost ceased, and the heart's action was almost arrested; $\frac{1}{60}$ grain of strychnine was given hypodermically, and artificial respiration applied. After five minutes the respirations improved, the lips became redder, and the pulse stronger. Vomiting recurred. The stomach tube was again introduced, and the organ washed out with warm albumen water. The cyanosis, dyspnoea, cardiac irregularity reappeared, so that the tube was withdrawn, and artificial respiration again started. In a short time the heart recovered, and the respirations improved, but artificial respiration had to be kept up for three hours to prevent relapse, by which time the infant began to open its eyes, make voluntary movements, and show signs of consciousness. For the next three days the pulse was rapid, the temperature 100.6°, and the infant was kept on milk and soup. After this it regained its normal state.

ADAM N. ROBERTSON,
Junior House-Surgeon, Albert Dock Hospital.

ADHESION OF SOFT PALATE TO NASO-PHARYNX.

Two children, aged 6 and 11 respectively, were sent to me by the medical inspector of schools, with a note stating that they were suffering from "adenoids." From the appearance of the children I quite agreed with the diagnosis. Neither of them could breathe through the nostrils, and both had every sign of the "adenoid face."

I had them up for operation next morning. On examination under anaesthesia not a trace of adenoids was found. There was not even thickening over the pterygoids. What I did find was a complete adhesion between the naso-pharynx and the soft palate. I tried to get a Gottstein curette up behind the soft palate, but could not force a passage. Ultimately I broke down the adhesions with my finger and made a clean sweep. The haemorrhage was considerable, but the result was eminently satisfactory. The sensation conveyed to the finger was very similar to that by an adherent placenta. Neither of the children had any enlargement of the tonsils. I have had many "nose and throat" cases, but have never before met with any condition such as I have described.

I have looked up all my textbooks, and not one of them mentions a case of the soft palate and posterior nares being adherent. The cause of the condition is not clear, but it occurred to me that it was probably congenital.

Birmingham. F. J. VINCENT HALL, M.B., Ch.B., etc.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE.

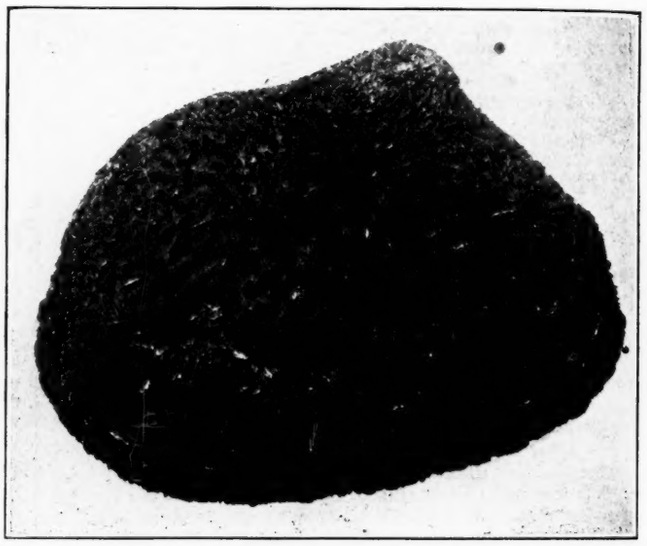
REMOVAL OF LARGE RENAL CALCULUS: RECOVERY.

(By H. BRUNTON ANGUS, M.S., F.R.C.S., Honorary Surgeon.)

J. T., aged 56, a miner, was admitted under my care on July 14th, 1908, complaining of pain in the right loin.

History and Diagnosis.

For six years on several occasions he had had pains in the "small of the back," not confined to either side. A year before admission the pain became localized in the right loin, radiating into the right iliac region, and sometimes shooting down to the right testicle. It was so bad that it doubled him up, and sweat stood in drops on his forehead; vomiting occurred during two attacks. For twelve months also there had been frequency of micturition, but he had never noticed blood in the urine. Twenty-six years ago he passed a piece of gravel the size of a pea. A radiograph showed the presence of a large calculus in the right loin.



Operation.

On July 17th, 1908, the ordinary oblique incision between the last rib and the iliac crest was made and the right kidney exposed. The pelvis of the kidney was seen to be distended, and a hard body could be felt through the wall. The pelvis was incised in the direction of the ureter and the calculus removed. The pelvis of the kidney was greatly hypertrophied to accommodate the stone; the kidney was little enlarged and seemed quite healthy. A purse-string of medium catgut was passed round the opening in the pelvis, keeping outside the cavity, and tied tightly. The wound was drained with rubber tube and the parietes united with interrupted catgut sutures, silkworm gut being used for the skin.

Subsequent Progress.

The wound healed without any leakage of urine, and the man got quite well.

Specimen.

The stone, reddish-brown and rough, is suggestive of oxalate of lime, but as it has not been sectioned I cannot give the composition. It weighs 6¾ oz., is rounded, and comes to a conical point where it projected into the ureter. As the size is unusual, I should like to hear if there is any calculus of larger size removed from the same situation in the museums of our British hospitals. It is interesting to notice that the kidney was not disorganized, but the pelvis had evidently grown with the stone which it accommodated, and urine must have passed all the time

Reports of Societies.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Friday, December 18th, 1908.

Sir PATRICK MANSON in the Chair.

The Rat-flea Theory of Plague.

DR. HOSSACK, of Calcutta, in a paper on the rat-flea theory of plague, said the position he was about to take up was diametrically opposed to generally accepted ideas, but his theory, though somewhat revolutionary, was based upon practice and observation, which alone could give the information that was wanted. The investigation of disease was generally futile when observers started with preconceived ideas as to its pathology, and much of the work that had been done on plague was open to this criticism. Since Patton's well-known experiments the rat flea theory had held the field, but it had now advanced far beyond the limit which these experiments or any others justified. If one began with the fixed idea that the rat flea was the principal agent in the transmission of plague, it was astonishing how many circumstances would be found to corroborate that view. Thus, the prevalence of plague was often found to correspond to the rat population, to the numbers of rat fleas, to the breeding seasons, to alleged preferential species of rats, and to many other things. But if one tested experimentally those statements it would be found that practically the whole of them were contrary to facts. It had, for instance, been said that the difference in the ratio of infection in Bombay and Calcutta corresponded to the relative differences in numbers of *Mus rattus* and *Mus decumanus*. As a matter of fact a recent rat census had shown that statement to be quite incorrect. Again, as to seasonal prevalence, both species of rats bred all the year round. Besides this there was no preferential species; *decumanus* was as susceptible to plague as *rattus*. In the Punjab, there were no *Mus rattus* at all, and they knew what had been the experience there with regard to plague. The theory advanced in the third report of the Commission that *Mus rattus* was ten days later in developing the disease was also unsupported by facts; and if the figures were looked into it would be seen that the illustrative charts do not correspond with the experimental data on which they are constructed. The Commission had also endeavoured to establish a "climatic plague temperature." The limit they gave was wide enough, namely, 85° F. to 50° F.; but even that appeared to be insufficient, for 100 per cent. of their own transmission experiments had been successful at 40°, and 70 per cent. at 90°. Clinical experience, indeed, was that plague has no preferential temperature. It was also the case that Calcutta was characterized by remarkable freedom from human fleas (*Pulex irritans*). On the other hand, dog fleas were abundant; rat fleas, again, were seldom or never found in Calcutta. Experiment and observation showed that most of the received ideas on the habits and life-history of rat and other fleas were wrong, for they were based on the assumption that fleas were evenly distributed. On the contrary, there was an extraordinary variation in the prevalence of different species of fleas in different parts of India. Statements, for instance, that light caused fleas to leave their hosts, or that they preferentially bit at night, were also incorrect. As to the important question, Does the rat flea bite man? the evidence that the rat flea had a strong distaste for the skin of man was conclusive. In conditions which were natural—more so than those of the Commission's experiments—only 1 in 6 attempts to induce rat fleas to bite the human skin was successful. Another point was that in acutely infected houses—say, houses in which 15 or 20 cases of plague had occurred—instead of swarms of rat fleas being found, none were seen, although they were carefully searched for. His conclusions were, first, that the rat flea, when unstarved, will not bite man at all; and, secondly, that when starved he does so very unwillingly. On the whole, the facts he had adduced as to the flea population rendered any idea of its active agency absolutely impossible. He could not conclude without acknowledging the courtesy and kindness which he had received from many fellow-workers, who took an entirely different view of the etiology of plague.

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Dr. G. FORD PETRIE said that he had the honour to take part in the work of the Indian Plague Commission, and as they knew, that body took an entirely different view to that of Dr. Hossack. Their position was that, although they did not deny the possibility of other methods of infection, the thing that mattered was the agency of the rat flea. There were abundant statistics to show the exact route of infection both in rats and in man. Of 5,000 dead rats picked up in plague houses, 72 per cent. had buboes in the neck, but no mesenteric buboes; of rats fed by infected material, only 36 per cent. had neck buboes. He thought that the experiments of the Commission, if carefully considered, fully proved that intestinal infection, as between rats, very rarely occurs. Rats, for instance, did not eat the dead bodies of their comrades. On the whole, he considered that the evidence that rat fleas were the essential method of transmission from rat to rat was conclusive. There was abundant proof, also, that in a man the route of infection was essentially the same. Skin abrasions in guinea-pigs—and they were about the most susceptible animals—rubbed by human secretions in which plague bacilli were swarming, hardly ever admitted the pathogenic organism. The facts that attendants in plague hospitals did not get plague, and that guinea-pigs placed in infected bedding were also immune, were highly significant. The experiments of the Austrian Commission had made it clear that infection takes place in the great majority of cases through the punctured skin, and at the Mahratta Plague Hospital in Bombay Dr. Choksy had shown that human infection is very rarely effected by the alimentary tract. The intestinal contents of the rat flea contained millions of plague bacilli, while in the excreta of the rat they were comparatively few in number. Again, the prevalence of plague at different places corresponded accurately with the rat-flea census; and still more was this true of the seasonal prevalence. Thus at Poona and Belgaum, where plague annually broke out badly in July and August, and at Bombay, where it did so in January, it had been found that the numbers of rat fleas closely corresponded to the case incidence at those seasons.

Sir HAVELOCK CHARLES said that the statistics which had been brought forward on both sides of the question were quite convincing, and the ordinary man was in consequence much puzzled as to what was the actual position. It was, however, the case that the association between rats and plague was invariable in India; nobody disputed that; and, taking everything into consideration, fleas presumably had a good deal to do with transmission. It had struck him that perhaps this was not a new theory; and that the plague which was conveyed by the Ark of the Covenant to Ashdod, Gath and Ekron was possibly transmitted by the fleas in the badgers' skins with which, they were informed, the Ark was covered.

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Dr. HOSSACK, in reply, said that the proportion of pneumonic plague in Bombay was only about 1 per cent., but that in other districts it was sometimes very prevalent, and might indeed form the whole epidemic. No doubt that was mostly direct infection. They counted fleas by chloroforming the animals on which they were living. The fleas were affected by the anaesthetic, and could be easily combed out and counted.

must also contribute to a more rapid return to his normal condition and lessen the anxiety which must occur to both operator and anaesthetist, especially when dealing with private patients.

F. J. W. PORTER, Major, R.A.M.C.

Colchester.

POISONING BY CYLLIN IN AN INFANT.

ON August 21st, 1908, an infant of 13 months was admitted into Wrexham Infirmary, having drunk, about twenty minutes before admission, a certain quantity of cyllin. The exact amount taken is unknown, but, according to the infant's mother, it was not much. The mother had been using it for disinfecting some articles used by her husband, who had just been removed from the house with typhoid fever, and, having left the bottle of cyllin on the chair, the child had got hold of it when her back was turned.

On admission the infant was quite unconscious, both conjunctival reflexes absent, the pupils equal, but slightly dilated. There was a strong odour of cyllin in the breath and slight corrosion of the lips. The face was very pallid. Voluntary movements were absent. Apomorphine $\frac{1}{10}$ grain was injected hypodermically, and the stomach tube introduced. The stomach was washed out with warm water. The tube being withdrawn, the infant vomited; the vomited matter looked like undigested food, but smelling strongly of cyllin. The respirations became very slow, cyanosis became very marked, both lips and ears being quite livid. Simultaneously the pulse was becoming feebler and more irregular, till almost impalpable. The respirations had almost ceased, and the heart's action was almost arrested; $\frac{1}{64}$ grain of strychnine was given hypodermically, and artificial respiration applied. After five minutes the respirations improved, the lips became redder, and the pulse stronger. Vomiting recurred. The stomach tube was again introduced, and the organ washed out with warm albumen water. The cyanosis, dyspnoea, cardiac irregularity reappeared, so that the tube was withdrawn, and artificial respiration again started. In a short time the heart recovered, and the respirations improved, but artificial respiration had to be kept up for three hours to prevent relapse, by which time the infant began to open its eyes, make voluntary movements, and show signs of consciousness. For the next three days the pulse was rapid, the temperature 100.6°, and the infant was kept on milk and soup. After this it regained its normal state.

ADAM N. ROBERTSON,
Junior House-Surgeon, Albert Dock Hospital.

ADHESION OF SOFT PALATE TO NASO-PHARYNX.

Two children, aged 6 and 11 respectively, were sent to me by the medical inspector of schools, with a note stating that they were suffering from "adenoids." From the appearance of the children I quite agreed with the diagnosis. Neither of them could breathe through the nostrils, and both had every sign of the "adenoid face."

I had them up for operation next morning. On examination under anaesthesia not a trace of adenoids was found. There was not even thickening over the pterygoids. What I did find was a complete adhesion between the naso-pharynx and the soft palate. I tried to get a Gottstein curette up behind the soft palate, but could not force a passage. Ultimately I broke down the adhesions with my finger and made a clean sweep. The haemorrhage was considerable, but the result was eminently satisfactory. The sensation conveyed to the finger was very similar to that by an adherent placenta. Neither of the children had any enlargement of the tonsils. I have had many "nose and throat" cases, but have never before met with any condition such as I have described.

I have looked up all my textbooks, and not one of them mentions a case of the soft palate and posterior nares being adherent. The cause of the condition is not clear, but it occurred to me that it was probably congenital.

Birmingham. F. J. VINCENT HALL, M.B., Ch.B., etc.

Reports
ON
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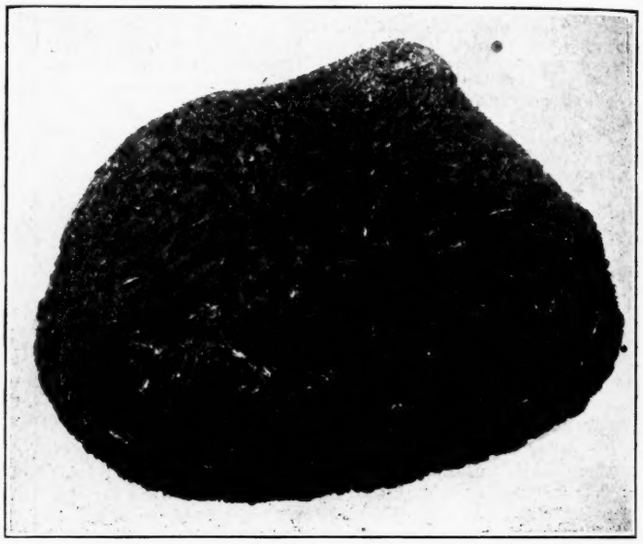

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ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Friday, December 4th, 1908.

W. G. SMITH, M.D., President, in the Chair.

Lupus Mutilans.

THE PRESIDENT showed a case of lupus mutilans, pointing out some unusual features: (*a*) Two symmetrical patches of ordinary lupus on the face, one on either cheek. Nodular lupus was rarely symmetrical on the face. (*b*) Lupus on the conjunctiva of upper and lower eyelids of both eyes. This had not spread from the adjacent skin or up the nasal duct. (*c*) Notable involvement of the soft parts of the fingers with deformity. (*d*) Changes in the bones of the digital phalanges, as shown by the *x*-ray photographs.

Habit Spasm.

Dr. COLEMAN exhibited a young girl who, two months before, on going to drill in an institution of which she was an inmate, noticed her right arm moving. The movement had continued ever since, except when she was asleep. It was regular, and at 160 to 180 to the minute. There was some loss of power, and the movement was intensified by resistance, and overflowed slightly into the right leg. There was nothing special in her family history, but he had found that the patient had been in the habit of using a sweeping brush, and the spasm was not unlike that movement. Similar cases had been recorded in which the movement had persisted for some time, and he took it to be hysterical in origin.

Persistent Ductus Arteriosus.

Dr. COLEMAN exhibited a girl, aged 15, who had never suffered from any special symptoms except dyspnoea on the slightest exertion. She had always been fragile, but had no special sickness in reference to her heart. She was admitted to hospital about a fortnight previously, complaining for the first time of pain in the region of the heart, which passed off in two or three days, leaving her as well as usual. On physical examination it was found that the impulse beat was in the mammary line in the fifth space and somewhat diffuse, and on palpation a remarkable thrill was noticed in the second and third left intercostal spaces. Another more abrupt impulse was felt opposite the third left space at the edge of the sternum, which coincided with the second sound. There was a very remarkable thrill along the left border of the sternum, which began immediately after systole, and extended almost up to the next systole. On auscultation a very loud murmur was heard, the maximum intensity being in the second intercostal space about an inch to the left of the margin of the sternum. The time of this murmur was late systolic. It persisted for a considerable time into diastole, and was heard as a practically continuous murmur up to the next first sound. There was no cyanosis, but the state of the blood was as in congenital heart disease. Some cases identified as persistent ductus arteriosus by Dr. Gibson, of Edinburgh, were identical with the signs in the present case. The intensified pulmonary second sound heard low down was very remarkable. It was not heard during every heart beat; it was generally present, but sometimes it was absent for a few beats. There was no clubbing of the fingers.

A Case of Cretinism.

Dr. MOORHEAD exhibited a case of cretinism—a girl, aged 7½ years. She had weighed 4 st., and under thyroid treatment went down in about three weeks to 2 st. 8¾ lb. The weight had been almost steady since. On diminishing the dose the child became irritable, and apparently was going back. The actual dose now being given was 10 grains of thyroid extract daily. That was above the dose generally recommended, but he had found an immediate improvement in the mental symptoms on 6 grains a day. The actual improvement for the last three months had been remarkably slow. The PRESIDENT said the condition had become extremely rare in the British Isles, and they were not very well able to fix its pathological boundaries. It was associated at one time with enormously large thyroids and at another time with atrophied thyroids. Dr. COLEMAN was inclined to think that sporadic cretinism was not so very uncommon, as he had seen four cases during the past twelve or fifteen years.

ROYAL SOCIETY OF MEDICINE.

SECTION OF ANAESTHETICS.

AT a meeting on December 9th, 1908, Mr. RICHARD GILL, President, in the chair, Dr. N. H. ALCOCK read a paper on fifty cases anaesthetized with known percentages of chloroform. The chloroform-laden air was supplied to the patient on the plenum system by the special apparatus devised by him, and described in our issue for August 15th, 1908. Dr. BLUMFELD considered the apparatus of special value for teaching purposes, and thought that every hospital should have an inhaler of this pattern, in order that students might learn something about the percentage of chloroform vapour required to produce the different stages of anaesthesia in varying types of patients. Mr. COLLUM referred in detail to some of the cases that he had anaesthetized by this method, which he considered most interesting and scientific, but he complained that in its present form it was too bulky and noisy to become popular. The instrument, moreover, required the assistance of a second person to pump the bellows, unless an electric motor were used. The latter was expensive and very heavy to carry about. He agreed with Dr. Alcock as to the remarkably large percentage of chloroform vapour usually required to satisfactorily anaesthetize fat patients, and mentioned one case in particular to emphasize this point. Dr. BEAUMONT said that he had noticed more after-sickness with this apparatus than when the open method was employed; and he ascribed the difficulty in the case of obese subjects to emphysema. In his reply, Dr. ALCOCK said he was at present endeavouring to remedy the faults pointed out by Mr. Collum. The increased after-sickness he thought must be a mere coincidence. The absolute accuracy of the apparatus could be depended upon, and oxygen could be used instead of air if desired. This was of great service in certain cases. Specimens of the inhaler, of various sizes and patterns, were shown. One was fitted with a foot-bellows, one with an electric motor to drive the air through the chloroform chamber, and one with an oxygen cylinder. The apparatus was also shown in section, so that the inner working of the instrument could be more thoroughly understood.

SECTION OF DISEASES OF CHILDREN.

At a meeting on December 18th, 1909, Dr. PORTER PARKINSON, in opening a discussion on *Whooping-cough*, pointed out that in England the death-rate per million from this disease had diminished of late years, from 527 per million in the years 1861-70 to 450 in the years 1881-90, and in 1895 to 316. It is more fatal in Scotland than in England; less so in Ireland. The contagion must be a specific organism, but had not yet been isolated with any certainty. The infection is conveyed by the sputum, which was said to be most virulent during the catarrhal and early paroxysmal stages. The virus remained active after drying for at least several weeks, as had been proved by epidemics arising on board ship where no other source was probable. It was easy to overlook the primary disease when bronchitis or pneumonia supervened, as the characteristic whoop then frequently disappeared. In respect of treatment, bromoform was recommended, with the warning that it should be dispensed in solution one drop to an ounce of water with a few drops of alcohol, 1 to 6 drachms being given in a dose. Dr. L. GUTHRIE, in referring to the history of whooping-cough, mentioned the term "chin-cough" as being still used in some parts of the country. It was derived from the name "la quintain," or "tussis quintana," by which the disease was known in Paris in 1578, the paroxysms being believed to occur every five hours. Bromide and belladonna were his favourite drugs for relieving the symptoms. Dr. WALTER CARR said that as regards prognosis, early manifestations were no guide to the subsequent severity of the disease. In treatment he regarded pure fresh air, at a temperature of about 60° F., as very important. If the child's temperature was 100° F. or over it should be kept in bed. He had tried various vapours and fumes, but was doubtful of their efficacy. He believed that bromide of potassium had a value, and in rubbing the child with a liniment. There was danger of upsetting the intestinal canal with overdrugging. When vomiting was pronounced, hyd. cum creta and bicarbonate of soda and rhubarb often did good.

When a child was vomiting constantly it was well to give a little food to bring on a paroxysm, and then after the vomiting to give more food, which would frequently be retained. Dr. J. D. ROLLESTON said that from 1899 to 1907 131,830 cases were admitted to the Metropolitan Asylums Board Hospitals, and of these 756, or 0.5 per cent., were suffering from whooping-cough. Another 855, or 0.6 per cent., subsequently developed whooping-cough as a complication. Of 55,557 cases of diphtheria, 340, that is, 0.5 per cent., were suffering from whooping-cough, and another 0.4 per cent. developed it as a complication. Whooping-cough had not any very unfavourable influence on the acute cases of infectious disease with which it was associated. Trousseau had remarked that the paroxysms of whooping-cough disappeared during scarlet fever, but his own experience did not confirm this. Dr. EWART pointed out the serious effects which frequently follow whooping-cough in children. He had often seen relief follow the instillation of oil into the nostrils. Patients should be placed in the best conditions for resistance, and should live in fresh-warmed, but not over-dry, air. Iodide of potassium was of value, and he believed in the inhalation of terebene and its use in a liniment. A respiratory belt, as advocated by Kilmer, was also good. Dr. MILNER BURGESS pointed out that only two papers on whooping-cough were included in the reports of the Society for the Study of Disease in Children. Very little had been added to the subject during the last eight years. In an experience of thirty years he only remembered one case of meningeal haemorrhage, and he asked why it was so infrequent. In respect to treatment he laid stress on very careful dieting with liquid food in small quantities, given immediately after a paroxysm. Dr. J. H. FRANCIS NUNN said that many children died from cerebral conditions due to the fits of coughing. He agreed that the diagnosis from the paroxysmal cough of influenza was sometimes very difficult. He reminded members of the old-fashioned method of sending patients to the gasworks to inhale the vapour, and recommended that the child should be placed in a room with the gas jet turned on for a quarter of an hour. Dr RUSSELL WELLS said that some French observers said that cases were only infectious during the catarrhal stage, and he was in favour of this view. Whooping-cough presented a characteristic symptom complex, which had led the speaker some years ago to think that the part affected must be different from that occurring in the ordinary cold. He thought that the symptoms were due to an effect on the nerves produced by a toxin secreted by the microbe. He regarded the symptoms of whooping-cough as due to an increased excitability of that part of the nervous system concerned with the vagi, and with this view had administered cocaine by the mouth, the dose being on the basis of a grain three times a day for an adult. He had never seen evil effects follow, and in children there was little danger of forming a habit. The results were often remarkable, the disease being greatly diminished and then abolished. Dr. J. BIERNACKI spoke with some favour of the plan of taking children to the gasworks, but wondered whether the benefit was due to the waste products there or to the gas. Dr. LEOPOLD GOFFE advocated syringing the ears twice or thrice daily with boric lotion and then painting the external auditory meatus and membrana tympani with a strong solution of cocaine. The formula was: Cocaine hydrochlor. 23 grains, liquor hydrarg perchlor. 20 minims, glycerine 5 drachms, water 4 drachms. Dr. E. I. SPRIGGS, in answer to the question raised by Dr. Milner Burgess as to why meningeal haemorrhage was so rare, pointed out that experiment during muscular exertion had shown how well healthy vessels could sustain a sudden rise of pressure without giving way. Dr. BERNARD BAILEY said that experience in the Children's Hospital, Shadwell, showed that the disease was not infective after six weeks' whooping. Dr. MEREDITH RICHARDS thought that the major amount of infection was in the early catarrhal stage. His practice was to exclude children from elementary schools for five weeks, and to exclude contacts for one month. Dr. GEORGE CARPENTER referred to 466 cases seen as out-patients, the majority of which were below the elementary school age. It was important to cleanse the naso-pharynx, and if necessary to operate on it. Four of his cases developed the whooping habit, which persisted for many years after the disease. Mr. R. CLEMENT LUCAS showed a young man who presented deformity of the chest and dwarfing in stature, as a sequence of whooping-cough at the age of 4 years. He was 21 years of age, only 5 ft. in height, and weighed 6 st. 10 lb. The thorax below the level of the nipples on both sides was deeply depressed as the result of the collapse of the lung in childhood, whilst above that level the chest was fairly developed. He had enjoyed good health up to the time of the attack of whooping-cough. Owing to the diminished lung capacity, he suffered from dyspnoea on exertion and found a difficulty in mounting stairs.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—At a meeting on December 9th, 1908, Dr. MICHELL CLARKE, President, in the chair, Mr. A. L. FLEMMING, in a paper on *Post-anaesthetic vomiting*, recorded conclusions based on observation of 500 consecutive cases anaesthetized at the Bristol Royal Infirmary. The proportion of cases in which vomiting occurred as the immediate result of the anaesthetic could be materially reduced by allowing only milk to be taken prior to the operation and entirely avoiding beef-tea; also by guarding against movement of the patient during the induction and in the course of anaesthesia. Rolling of the patient from side to side during operation or subsequent bandaging was a frequent cause of vomiting. For inducing anaesthesia he recommended the use of gas and ether combined during the first twenty minutes, followed by the administration of chloroform and ether from separate bottles if prolonged anaesthesia were required. Post-operative bronchitis and pneumonia were usually due to inhalation of vomited matter by the unconscious patient. The methods he described had reduced the percentage of patients vomiting after recovering consciousness to 5 per cent. Dr. J. SWAIN agreed that movement should be avoided; pneumonia due to inhalation of vomited material was, as a rule, not the fault of the anaesthetist. It might often be prevented by washing out the stomach before the operation. Mr. S. V. STOCK said he endorsed the value of substituting milk feeds for beef-tea before operation. Prolonged fasting was bad. A sister at a children's ward had remarked to him that occasionally children preparing for operation refused to take the milk feed during the morning before operation, and such children nearly all vomited; only a small proportion vomited of those who took the milk. Lavage of the stomach would not always prevent vomiting if the operation were protracted; he would always wash out the stomach before, rather than after, the patient was anaesthetized. Mr. HEY GROVES said that movement of the patient could not always be avoided, the "fear of the table" made it necessary in some cases to administer the anaesthetic elsewhere than on the operating table. Patients did not vomit until the anaesthetic was stopped, so they should be kept fully anaesthetized until the bandaging was finished and the patient returned to bed. Mr. PAUL BUSH suggested that the patient should be anaesthetized in an adjoining room upon the actual operating table, which could then be wheeled into the theatre. Dr. SYMES maintained that the duration of the operation influenced the frequency of vomiting, which was the result not only of the drug administered, but also of the nervous shock. This shock was proportional in some measure to the length of the operation; moreover, nervous people often experienced nausea and even vomiting after administration of nitrous oxide. Two drugs—morphine and atropine—administered in water before the operation appeared each to lessen vomiting. Dr. BERTRAM ROGERS inquired whether the various commercial methods of preparing chloroform or ether could be said to affect vomiting. Dr. OGILVY drew attention to the proneness of ophthalmic cases to vomit during the course of operation. Dr. FORTESCUE-BRICKDALE remarked that beef-tea stimulated gastric secretion, and would on that account be more likely to contribute to vomiting than milk. Mr. LACE quoted the experience of a colleague who had found that the administration of nothing but peptonized milk for twenty-four hours before operation diminished the chances of anaesthetic vomiting; and on inquiry he had found a consensus of opinion among nurses to the same effect. Mr. FLEMMING, in reply, said that preliminary lavage of the stomach sometimes gave the anaesthetist a false sense of security; in faecal vomiting it was useless, for during a long operation regurgitation into the stomach provided

fresh material to be vomited. The suggestion of anaesthetizing patients on the operating table would only affect the vomiting during induction of anaesthesia. He objected to the preliminary use of morphine and atropine on account of the difficulties they introduced during anaesthesia. As to the use of acetone chloroform, he thought that, with the addition of sufficient ethyl chloride to render the evaporation point stable, it was a safe anaesthetic, but he preferred to administer a preparation about which there was no doubt. Mr. HEY GROVES read a paper on *Three cases of ileo-colostomy*. From the success in these cases he was persuaded that the operation was at times of great value, although occasionally the antiperistaltic wave which normally occurred in the ascending and transverse colon gave rise to painful distension in the occluded portion of bowel. The other communications included a paper on *Barley itch*, in which Dr. W. KENNETH WILLS described a pruriginous eruption seen in dock-workers engaged in the unloading of certain varieties of barley; it was due probably to the presence of "Cowhage" (*Mucuna pruriens*) among the barley, although he had also found an acarus, not the *Sarcoptes hominis*, present in some samples.

LIVERPOOL MEDICAL INSTITUTION.—At a pathological meeting on December 10th, 1908, Mr. T. H. BICKERTON, President, in the chair, the following were among the exhibits:—Mr. NEWBOLT: (1) Carcinoma of transverse colon in a woman aged 40; perforation had taken place. Excision of the growth with pelvic drainage and secondary end-to-end suture resulted in recovery. (2) Volvulus of caecum causing intestinal obstruction in a male aged 60; the caecum was excised and the bowel drained. The patient died on the fourth day. (3) Two specimens of sloughing intestine excised in cases of strangulated herniae; immediate end-to-end suture was done in both cases successfully. (4) Malignant growth of the sigmoid causing intestinal obstruction in a male aged 32. The growth was brought outside the abdomen and colotomy performed; secondary resection and end-to-end suture was done later. Mr. FRANK JEANS: A gall stone which had caused gangrene of the bowel 1 in. from the ileo-caecal valve. Peritonitis was present; the history resembled that of a perforated appendix. Mr. R. W. MURRAY: A case of Paget's disease of the nipple of three years' duration. Dr. BLAIR BELL: (1) A hypernephroma. (2) Uterus didelphys from a patient aged 21. Each uterine body lay in an inguinal sac. Radical cure was done on each side, the right tube and ovary being returned to the abdomen. Mr. THELWALL THOMAS and Dr. MURRAY BLIGH: (1) A neuro-fibroma of the posterior tibial nerve from a female aged 51; it was of slow growth, and full of soft myxomatous tissue. (2) A lobulated tumour removed from beneath the gluteus maximus of a female aged 56. The patient gave a history of three months' duration. (3) A "mole" from the face of a farmer aged 75. It had existed for twelve months but had rapidly increased in size recently. Dr. W. B. WARRINGTON read a note on the more recent physiological experiments upon the cerebellum. He stated the views of Herbert Spencer, Hughlings Jackson, and others, and demonstrated the connexion between the physiology of this organ and symptomatology. He illustrated his paper with numerous diagrams showing the anatomical connexions of the cerebellum.

MIDLAND MEDICAL SOCIETY.—At a meeting held on December 16th, 1908, Professor GILBERT BARLING, President, in the chair, Mr. NUTHALL showed a man who had sustained a *Penetrating wound of the heart*. Whilst pulling a barge nearer the canal side the heavy boathook he was using slipped and came into violent contact with his chest as he was leaning forward. A large splinter penetrated into and broke off in his chest. He seized the protruding portion and wrenched out a piece some 6 in. in length, but feeling acute pain he came to the hospital. Seen half an hour after the accident he evinced acute dyspnoea. A foreign body could be seen and felt projecting under the skin over the third left intercostal space. The entry puncture was situated 1½ in. below the centre of the left clavicle. On cutting on to the splinter it was found to have entered the chest through the third left space; and to have passed into the pericardial sac. The track was enlarged and the splinter followed into the pericardial sac. The splinter was drawn out. Three and a half inches had entered the pericardium, the whole piece being 5⅜ in. long. There was no pneumothorax. A condition of pleuropneumonia without effusion complicated the after-progress to recovery. The man was now, six months after the accident, about to resume work. Mr. J. FURNEAUX JORDAN showed two specimens of *Ovarian tumour*. The patient in the first case, aged 38, had on August 9th a six months miscarriage, after which her doctor found a small tumour in the lower left part of the abdomen. In four weeks this small tumour had grown rapidly, rising well above the umbilicus and filling up the left side of the abdomen and partly the right. In the second case, a doctor found a small tumour in the pelvis of a woman aged 53. A month later it had grown to a large median tumour, rising as high as an inch above the umbilicus, and was removed. The first specimen proved to be microscopically a most malignant carcinoma, the second a multilocular cyst, the cavities lined by a regular layer of large goblet cells, and filled with mucinoid material. The first patient already showed signs of a recurrence of the growth in the peritoneum; the second one was in perfect health. Dr. O. J. KAUFFMANN showed specimens from a case of *Acetonaemia*. The patient was a woman aged 20. She had suffered for five years from symptoms closely resembling those of gastric ulcer, including haematemesis. Shortly after admission into hospital diaceturia and acetonuria were discovered. The patient then had sudden severe symptoms suggesting perforation of the ulcer, and under chloroform an emergency laparotomy was at once done, but no perforation was found, nor was any evidence of gastric ulcer to be seen. Ninety hours after the laparotomy the patient died, having vomited frequently, blood once, and having gradually become comatose. The urine subsequent to the operation had become scanty, and the last few specimens had been devoid alike of aceto-acetic acid and acetone. The liver weighed only 36 oz., and showed intense fatty infiltration; the kidneys showed scarring, but no trace of interstitial or subcapsular nephritis. There was also some fatty infiltration of the tubular epithelium. The heart showed only some fibrosis, no fatty change. There had been no ulcer either in the stomach or duodenum. Death was attributed to the acetonaemia, due, in the first place, to some indefinable digestive disturbance, and intensified by the chloroform; in other words, delayed chloroform poisoning in an acetonaemic individual.

HARVEIAN SOCIETY OF LONDON.—At a meeting on December 10th, Dr. CHARLES BUTTAR, Vice-President, in the chair, Dr. VICTOR BONNEY, in a paper on the bearings of pathology on the prevention, diagnosis, and treatment of carcinoma of the cervix, said that out of 1,876 cases investigated at the Middlesex Hospital Cancer Research Laboratories no less than 1,796 were in women who had been married, and only 9 per cent. had not borne children. Clinically a case in an undoubted virgin was almost unknown. Every case of carcinoma of the cervix appeared to be founded on a chronic cervicitis *plus* some unknown additional factor. The incidence of the disease might, perhaps, be lessened by greater attention to the hygiene of the cervix and vagina in married life, in which connexion habitual vaginal douching was to be commended. From the pathological point of view the surgery of the disease was quite hopeful. No less than 55 per cent. of persons dying of carcinoma of the cervix exhibited no metastatic growths whatever, whilst in the case of the breast only 6·5 per cent. so escaped. The track of lymphatic permeation was very simple, straight out through the parametrium to the external iliac glands. The bladder and rectum were involved by the much slower process of infiltration. The operation popularized by Wertheim satisfied the demands of pathology, and was destined to become the only operation performed for the cure of the disease. Improved technique had greatly reduced its mortality. It was especially suitable for early cases. The speaker and Dr. Comyns Berkeley had now performed twenty of these operations, mostly in advanced cases, with four deaths.

Reviews.

PROBLEMS OF THE NOSE.

"IF you see a head, hit it," was the Irishman's injunction at Donnybrook Fair. The modern textbook on rhinology is more helpful; it tells you in how many different ways this injunction—so far as the nasal septum is concerned—may be carried out. Dr. GLEASON, in his *Manual of Diseases of the Nose, Throat, and Ear*,[1] mentions nine operations which have been devised for the correction of deviation of the nasal septum. With a pardonable patriotism, the operations which he has mentioned are for the most part those devised by American surgeons, and naturally include the one devised by himself, a description of which we are glad to read in the author's own words. In addition to these, he gives Dr. Ballenger's own description of his technique of performing the so-called "window resection" operation of the deviated area, which Dr. Gleason tells us "was advocated first by Ingals, and later by Krieg," adding that "Killian removes the cartilage and bone of the entire deviated area, preserving the mucous membrane of both sides of the septum." This list of ten could easily be increased to a dozen or even two dozen operations which have been devised for the same purpose. We are reminded of an apt remark made by Dr. Gleason's compatriot, Dr. John N. Mackenzie of Baltimore, in an address at a meeting of the American Laryngological Association in 1904: "Even a partial list of the operations performed on the septum would rival in length the catalogue of the ships in the Iliad, or the genealogical records of Deuteronomy." Be that as it may—again to quote Dr. Mackenzie—"no single method is applicable to all cases, and it will sometimes be necessary to resort to several different procedures in individual cases before the deformity is overcome." In the present day it is commonly conceded that abnormal conditions of the nose and of the naso-pharynx are important factors in causing deafness and disease of the ears. Dr. Gleason has devoted to this important subject a chapter which is evidently the outcome of experience. It is carefully written, and illustrates very well how only those who are actually engaged in the practice of otology are in a position to express a useful opinion on what has been at times a debatable subject. In this, as in every other textbook of the kind, there are points open to criticism, but taken as a whole the author has undoubtedly achieved his object, which was to supply to students and general practitioners a manual with the essential facts of rhinology, laryngology, and otology in as concise a form as possible. The book is compactly printed and well bound, and with its limp leather cover and red edges presents outside the appearance of what it is inside—a concise concordance of the subjects it deals with.

The appearance of Dr. LEO KATZ'S monograph on the diseases of the nasal septum and their treatment[2] is further evidence of the fact that the nose is receiving in the present day that prominence which nature intended it should always enjoy. Dr. Katz treats of his subject in twelve chapters. The first six are concerned with anatomical considerations, methods of examination and the production of anaesthesia of the nasal septum, as well as the deformities of that structure and their correction; the last part of the book deals with the diseases and new growths met with in this region. The entire monograph occupies 170 royal octavo pages, and a proper sense of proportion is observed in the amount of space allotted to the several chapters. In discussing the treatment of deviation of the septum he gives preference to the submucous resection operation as performed by Professor Killian. Brief mention is also made of methods devised by other authorities—amongst them that by Asch, one of the pioneers in this work, whose name we note throughout is incorrectly spelt. In an age unparalleled for wealth and variety of instruments designed to attack the nasal septum, it is a pleasure to read Dr. Katz's observation anent this point that "In der Beschränkung zeigt sich erst der Meister."

Dr. DE HAVILLAND HALL'S textbook on *Diseases of the Nose and Throat* has during the past fifteen years introduced so many students and practitioners to the study of rhinology and laryngology, that it is quite unnecessary for us to dwell upon its general merits and utility. Mr. HERBERT TILLEY, who assisted Dr. Hall in writing the second edition, tells us in the preface that when the time arrived to consider the question of this, the third edition,[3] Dr. Hall desired to be relieved of all responsibility in the work, and with reluctance Mr. Tilley finally consented. That the old order is changing and yielding place to new, and calling for new editions of books on rhinology, is borne in upon us by the "passing" of Bellocq's cannula. It seems but yesterday that students were led to believe that the whole range of nasal surgery was comprised within a knowledge of the use of the polypus forceps, and of an instrument which bore the name of Bellocq, and that a lack of knowledge of how to manipulate the latter upon the day of reckoning might be materially to their disadvantage. Even if Bellocq's cannula still survives as a test of knowledge for examination purposes, it is disappearing from the practical textbooks. In the last edition of the book before us its doom was foretold, and no mention is made of it in the present edition. Mr. Tilley reminds us that the book is "intended to form one of a *Practical Series*, and consequently symptoms, diagnosis, and treatment are more fully discussed than debatable matters relating to the etiology and pathology of the various diseases of the nose and throat." Here we are disposed to join issue with Mr. Tilley. The discussions held from time to time, and more recently those in the Odontological and Laryngological Sections during the meeting of the British Medical Association at Sheffield, would lead us to believe that the treatment of at least one of the diseases of the nose—namely, suppuration within the antrum of Highmore—is a very debatable subject indeed, and that the pathology of that disease has been really more neglected than debated. In a textbook intended for the use of students attention to the etiology and pathology as conducive to a better understanding of the treatment of disease might have been more insisted upon. Dr. Charles Bolton has considerably added to the value of the work from the standpoint of the medical practitioner by his article on diphtheria and the throat affections of the acute specific fevers. A new feature of this edition is a chapter dealing with certain practical points in the anatomy and physiology of the nasal cavities. Additional space is given to a description and treatment of the diseases of the accessory sinuses. Photographs and diagrams of these regions undoubtedly lend themselves to book-making, and many new plates have been introduced. By the insertion of some of these illustrations into the text and by a compression of the type the book might have been kept more nearly to its original dimensions and at the same time made more portable and more readable without detracting from its practical value. Mr. Tilley has made it quite clear to his readers that operations undertaken for diseases of the frontal sinus may be attended with complications of a very serious nature, and with commendable courage he has introduced a plate illustrating osteomyelitis of the skull resulting from septic infection of the diploë after operation on the frontal sinus from one of his own cases. One cannot close the book without the reflection that, at least in the matter of the frontal sinus, operations are not to be undertaken lightly, and in the less severe cases perhaps after all it would be better to use an extra pocket-handkerchief a day than be a dead man for the rest of one's life.

Of the many bony cells and cavities from which otologists and rhinologists have to evacuate pus, there is not one which causes them more anxious thought than the frontal sinus. The complications of inflammation within the frontal sinus, which may occur not only before but after the sinus has been opened by an external operation, form the subject of a monograph by Professor P. H. GERBER of

[1] *A Manual of Diseases of the Nose, Throat, and Ear.* By E. B. Gleason, M.D., LL.D. Philadelphia and London: W. B. Saunders and Co. 1907. (Post 8vo, pp. 556. Illustrated. 12s.)

[2] *Die Krankheiten der Nasenscheidewand und ihre Behandlung.* Von Dr. Leo Katz. Mit 8 Tafeln und 34 Abbildungen im Text. Würzburg: Curt Kabitzsch (A. Stuber's Verlag). 1908. (Sup. roy. 8vo, pp. 180. M. 6.80.)

[3] *Diseases of the Nose and Throat.* By Herbert Tilley, B.S.Lond F.R.C.S.Eng. London: H. K. Lewis. 1908. (Demy 8vo, pp. 552, 12 illustrations. 14s.)

Königsberg.[4] These complications are a *bête noire* well known to every rhinologist, and yet textbooks on diseases of the nose barely touch the fringe of the subject. When it has been stated that Professor Gerber's monograph covers 450 royal octavo pages of closely-printed matter in wh ch the author strictly adheres to the title of his subject, and in which space is nowhere trespassed upon by descriptions of operations with their accompanying illustrations, it becomes unnecessary to enlarge upon the importance of the subject, or to emphasize the serious consideration which it deserves. From the standpoint of the surgeon the complications and their treatment completely overshadow the disease itself, and from the standpoint of the practitioner who has to weigh the *pros* and *cons*, and bear some responsibility in advising his patient either against an operation or to incur the risks of an external operation on the sinus, a knowledge of the complications is of more value than a textbook description of the operation itself. The descriptions of these operations, together with the figures and plates illustrative of the instruments and the technique which bulk so largely in textbooks on rhinology, might usefully be suppressed or curtailed to make room for information more useful, if not so alluring, to the practitioner. Professor Gerber's monograph has taken over five years to produce, and he is to be warmly congratulated upon its completion. It is not possible here to do more than give the general scope and scheme of the work. The osseous changes, both pathological and developmental, naturally occupy a large amount of space, in fact, about one-fourth of the book, and chapters on the anatomy and morbid histology follow. The paths of infection and the bacteriology of the disease receive careful consideration. In the next 200 pages the intracranial complications are treated. The book concludes with a chapter on the prophylaxis of the complications, the indications, the dangers of the operations, and a critique on the fatal operation cases. At the end of each chapter there is a very full bibliography, and the points raised in the chapters are illustrated by cases. By no means the least valuable part of the book is the tabular matter of typical cases collected from the literature, they make Dr. Gerber's work a complete compendium of our knowledge of the subject, and our sense of gratitude is only intensified by the thought of the amount of time and of patient literary research the work has called for. Dr. Gerber has rendered a considerable service, it is to be hoped, in more ways than one by the publication of this monograph. It will not deter experienced rhinologists from opening the frontal sinus when circumstances render such a procedure imperative. Moreover, it is not intended to do so; "mein Thema," writes the author, "sind die komplizierten Stirnhöhlenentzündungen, die operiert werden müssen." A careful perusal of the work cannot fail to raise for serious consideration the all-important question when the frontal sinus should be opened. "How often has the frontal sinus been opened to find little or nothing pathological in its interior is a question," says Dr. John N. Mackenzie in the address from which we have already quoted, "that never will be answered." It is not uncommon while still in his apprenticeship days, and even before he has completed the manuscript of that textbook on the subject which he has chosen for his special department of practice, that the young man's fancy lightly turns to thoughts of opening the frontal sinus. Should his eyes happen to fall upon one of the sentences on the last page of Professor Gerber's book—perhaps it would be as well not to translate it—"Zum mindesten sollen wir die probatorische Eröffnung der Stirnhöhle nicht scheuen"—it is to be hoped that he will also read the subsequent lines: "Nein! Ich habe nicht zu viel operiert! Auch hier Zahlen für Worte! Ich habe etwa 500 Stirnhöhleneiterungen gesehen und davon 80 operiert, d. i. 16 Prozent. Ich habe gegen 80 Prozent Heilungen. Ich habe keinen Todesfall." It is to be hoped further that he will have the courage to publish his fatal cases; a glance at the last table in Dr. Gerber's book will at once convince him that in so doing he will be in the most excellent company.

[4] *Die Komplikationen der Stirnhöhlenentzündungen. Beiträge zur Anatomie, Pathologie und Klinik der Stirnhöhlen.* Von Dr. P. H. Gerber. Berlin: S. Karger. 1909. (Sup. roy. 8vo, pp. 466. 36 Abbildungen. M. 15.)

The basis of Dr. BRADEN KYLE'S *Textbook of Diseases of the Nose and Throat*,[5] which has now reached its fourth edition, is pathology. This in itself constitutes a sufficient claim to recognition. The author tells us in his preface that it has been his "aim to give in full the etiology and pathology of the various diseases, so that by this detailed description treatment is indicated and easily directed." The book will do this and more. It will check an empiricism which begets recruits for that "fraternity of carpenters," for whose higher education Dr. Braden Kyle's compatriot, Dr. John N. Mackenzie, so earnestly pleaded before the American Medical Association. In a word, Dr. Braden Kyle credits his readers with some power for deductive reasoning, and appeals to it. The natural laryngologist of to-day, impatient for results, only too ready to accept rather than to investigate, with a desire to please or a desire to cloak, is apt to stifle his powers for deductive reasoning, and to fall back upon the Herr-Professor-hat-gesagt line of argument. Whilst readily conceding that in the matter of experience age brings with it a certain something that nothing else can bring, it is as well to remember that even a Herr Professor who has not paid attention to pathology may arrive at erroneous conclusions drawn from his own clinical impressions—pure empiricism. The appearance of a textbook on diseases of the nose and throat in which so much attention is drawn to the etiology and pathology of the diseases is a sign of the times, and a most welcome sign. In Dr. Braden Kyle's work those seductive diagrams of surgical achievements of which we are all so weary have been left on one side to make room for some excellent plates and figures illustrating the morbid anatomy and histology of the diseases. Whilst the general plan and arrangement of previous editions have been adhered to, the book has been thoroughly revised, and many entirely new articles have been added. The book is well printed, well bound, and well illustrated; moreover, it has an index which is remarkably complete. For the experienced it will be a work for ready reference, while on the inexperienced it will create a good impression and cause the subject to be viewed from a scientific standpoint.

PREGNANCY AND APPENDICITIS.

RENVALL'S work on appendicitis during pregnancy and labour[6] is one of a long series of monographs of high scientific value, inspired by the teaching of Professor Otto Engström. They stamp the University of Helsingfors as one of the best centres of medical teaching in the world, in spite of its disadvantages. These disadvantages are, first, the use of a language unintelligible to most civilized people; Dr. Engström's pupils get over this by writing in German. Secondly, the liability to interference by stupid military officials. We hope that the Russian Government may gradually come to see that the best thing for Finland is to leave it alone, and let it govern itself, as it was doing so well in 1897, when some of the English members of the International Medical Congress visited that enlightened country—the intellectual jewel of the Russian Empire.

The book before us is one of the best monographs on its subject that has yet appeared. The author has been laborious in his search after material, and comes to sane and wise conclusions. It has been stated that appendicitis in pregnancy is commoner than is generally supposed, and the inference follows that pregnancy in some way favours appendicitis. Our author points out that the months during which a woman is carrying a child within her form only a small part of her life, and that therefore if her appendix is so constructed as to give trouble, the chances are in favour of the trouble coming when she is not pregnant. That appendicitis with pregnancy has been more frequently reported in recent years is accounted for by the spreading of knowledge as to the diagnosis and treatment of that disease. It has been said that pregnancy favours the occurrence of appendicitis, and increases its dangers, by the pressure of the enlarging uterus, the lifting up of the pelvic peritoneum, and dragging upon adhesions. Renvall points out that if this were so appendicitis should be

[5] *A Textbook of Diseases of the Nose and Throat.* By D. Braden Kyle, A.M., M.D. Fourth edition. Philadelphia and London: W. B. Saunders Company. 1907. (Med. 8vo, pp. 725, 215 illustrations. 18s.)

[6] *Uber Appendicitis während Schwangenschaft und Gebert.* Von Gerhard Renvall. Aus der Gynakologischen Klinik von Professor Dr. Otto Engström in Helsingfors. Berlin: S. Karger. 1908. (Sup. Roy. 8vo, pp. 119. M. 4.)

especially frequent in the later months, when these effects are at their height. He gives an analysis of over 160 cases, and shows that appendicitis is as common before the uterus has risen out of the pelvis as it is later. When the appendix has been inflamed it is not in every case adherent to the uterus. Such pressure or pulling as the enlarging gravid uterus may exert is very gradual and gentle. Renvall's general conclusion is that pregnancy neither favours nor hinders the occurrence of appendicitis, either primary or recurrent; nor, if such illness occurs, does pregnancy appreciably affect the severity or duration of the disease. But it cannot be denied that if localized suppuration round the appendix is present at the time of labour, the sudden diminution in the size of the uterus after delivery (as well as other influences acting at that time) may lead to the breaking down of adhesions, and to a local peritonitis becoming general.

The diagnosis of appendicitis is a little more difficult during pregnancy than in ordinary conditions, because the lifting up of the pelvic peritoneum and the tension of the abdominal wall make palpation less certain; a patient who is near the end of pregnancy is apt to take for the beginning of labour pain which is really due to a different cause.

There is difference of opinion as to the treatment of appendicitis in pregnancy. Some French surgeons have expressed what many will think extravagant views; and urged operation in every case and as early as possible. Dr. Renvall seems to us here very sensible. He says acute appendicitis in pregnancy is to be treated according to the accepted principles of surgery: a careful consideration of all the features of the case, and intervention when the symptoms become threatening. The only difference that he would make is that in a recurrent attack during pregnancy he would operate sooner than in the case of a patient not pregnant, so as to prevent possible complications in childbed. Some persons have urged that whenever acute appendicitis requiring operation occurs during pregnancy the uterus ought to be at once emptied. Dr. Renvall holds that cases must be differentiated. The surgeon may have to do with (1) an encapsuled abscess, or (2) diffuse peritonitis. (1) If an encapsuled abscess is present there is now abundant evidence that it can be successfully treated without interfering with the pregnancy. Forced delivery is in such cases injurious rather than beneficial; it robs the patient of her prospect of a living child, and even if there is reason to think that a child is dead, it inflicts on her two operations instead of one. (2) If diffuse peritonitis is present the treatment indicated is to drain the peritoneum, and this can be more efficiently done if the uterus has been emptied. Here, therefore, speedy delivery is called for. If there is much meteorism it is impossible to drain the peritoneum without it. But, he adds, individual cases may call for exceptional treatment.

After laying down the very sane and temperate propositions that we have quoted, the author reports 25 hitherto unpublished cases, 23 of which were observed in the clinic of Professor Engström and reported by the author. The other two were under the care of Professor Krogius, and have been communicated to the author by friends. Then follow abstracts of 253 published cases, and after that a large but not complete list of literary references.

We regard this monograph as one of the best contributions to our knowledge of a difficult subject that has yet appeared. It does its author the greatest credit. We congratulate Professor Engström on having a pupil and follower so intelligent, industrious, and sensible.

TEXTBOOKS OF HYGIENE.

THE *Manual of Hygiene*, which was brought out by the late Dr. Edmund A. Parkes forty years ago, always held its own, not only as a textbook for students, but also as a book for reference; and successive editors, including Professor de Chaumont and Colonel Lane Notter, kept up its reputation in these respects. In 1896 Colonel Notter and Colonel R. H. Firth, while retaining the general scheme adopted by Parkes, to a great extent rewrote the work, and altered the title to *The Theory and Practice of Hygiene*. The third edition of this book has now been very extensively revised by Colonel Firth, the revisions being so extensive as to render the work almost a new one.[7] A rearrangement of the section dealing with sanitary law has added very much to the value of the book for purposes of reference. At the end of each section the law relating to the subject of the particular section is given in some detail. For example, the law relating to bakehouses is given in the chapter upon food, and in the chapter on water there is a summary of the Acts of Parliament relating to water supplies. The chapter upon sanitary administration is for the most part reliable, though one or two slips have been made. The statistical tables given on pages 17 and 18, which, it is stated, are those required to be appended to the annual reports of medical officers of health, have not been in use since 1900, and no mention is made of the excellent Table V, relating to infantile mortality, which has been in use since 1905. It is a pity, too, that the copy of the annual memorandum issued by the Medical Officer of the Local Government Board, with respect to the annual reports of medical officers of health, should not have been of more recent date. That given on page 13 was issued in 1904, and does not contain any reference to the need of inspecting and reporting upon public elementary schools, to which special reference was made by the Board's medical officer in 1906 and 1907. When discussing the utility of isolation hospitals, Colonel Firth admits that it is very difficult to demonstrate the precise effect of isolation hospitals, either upon scarlet fever or any other kindred disease, by means of statistics, which require a large amount of qualification before they can be of any value for comparative purposes. He points out that if an attempt is to be made to express in figures the effect of the isolation of scarlet fever or any other disease in special hospitals, the attack-rate should be expressed not in the terms of the entire population but of those exposed to infection. He expresses the opinion that so far as mere statistics are concerned the case is not proven that isolation hospitals have brought about no reduction in the incidence of scarlet fever, and he very properly asks whether it is wise to apply statistics to a problem of which none of the factors are constant, and where there is a varying host, a varying parasite, and, in some instances a varying age-grouping of the population. The views of the author upon the much-debated question as to whether isolation hospitals should be permanent or temporary buildings will meet with the approval of most of those who hold that isolation is necessary. He considers that all administrative arrangements and a certain limited accommodation for the sick should be in permanent buildings, which can be quickly supplemented if need be in times of epidemic. The various methods of disinfection are dealt with in an exhaustive manner. The different types of steam disinfectors are accurately described and their capabilities are very fairly estimated. No mention is made, however, of the method of disinfecting books suggested by Dr. Symons, of Bath, in which they are placed in a steam disinfector fitted with a vacuum apparatus; at a point in the oven most distant from this apparatus formalin is placed in a vaporizer, and formic aldehyde and steam are liberated at about 80° C. as the pressure inside the machine is reduced. A clear and concise account is given of the Rideal-Walker method of testing the strength of disinfectants, and although the drop method is criticized, the opinion is expressed that with modifications it may constitute the simplest procedure in standardizing disinfectants. With the establishment of a special sanitary service both in the regular army and in the Territorial Forces, much more regard will have to be given to military hygiene than has hitherto been the case. Colonel Firth devotes one of the longest chapters in the book to this subject, which he treats in a practical and masterly manner. The section upon the hygiene of camps should be studied by all those who are likely to be called upon to advise the military authorities as to the provision of sites for camps or as to their conduct when established.

It is just eighteen years since Dr. B. A. WHITELEGGE brought out his textbook on *Hygiene and Public Health*, of which there were subsequently issued nine editions. In 1905 Dr. GEORGE NEWMAN assisted in the compilation of

[7] *The Theory and Practice of Hygiene.* (Notter and Firth.) Revised by R. H. Firth. Third Edition. London: J. and A. Churchill. 1908 (Roy. 8vo, pp. 1009. 21s.)

the tenth edition, and an eleventh edition by the same authors is now before us.[8] The general arrangement is the same as in former editions. One noticeable feature of this manual is the inclusion in its pages of the text of important regulations and instructions from the Local Government Board and other Government departments. The majority of medical officers of health are in private practice and are not provided with an office in which official documents can be properly indexed and produced at a moment's notice, so that it is of the greatest service to them to be able to find copies of such documents gathered together in one book. At the present time, when the duties of the district medical officer of health and those of the newly-appointed school medical officer are not too well defined, the former will find an advantage to refer to the latest memorandum of the Local Government Board concerning his duties with respect to schools and infectious disease, and he will receive a great deal of assistance from the perusal of the regulations laid down by the Education Committee of the London County Council with respect to infectious diseases in elementary schools. The authors have set out both these documents at length and have commented on some of their provisions. The carefulness with which the revision for this edition has been carried out is apparent on every page, so that it is all the more surprising to find even a qualified approval given to the privy-midden system of excreta removal. It ought to be clearly pointed out on p. 249 that ashes are sterile, and that a privy midden without any structural alteration may be made into an inoffensive earth closet by throwing on to the excreta a sufficient supply of dry earth, "ordinary mould being the best owing to its richness in nitrifying organisms."

NOTES ON BOOKS.

EVERY fresh edition of *The Medical Directory*[9] inevitably contains a certain amount of additional matter, but in spite of this its publishers, Messrs. J. and A. Churchill, usually contrive to avoid material increase of weight. This is of some importance to those who have to handle this invaluable volume frequently, and in the edition for 1909 they have been completely successful in this respect. The total number of names in the directory is now nearly 40,000—in precise figures 39,992—exclusive of those in the list of graduates and licentiates in dental surgery. This is an increase of 289 over last year, but a smaller increase than usual. Indeed, for the past five years the number of additional entries has been steadily falling. In most respects the distribution of the contained names is much the same as in former years, but there are one or two interesting differences. Thus the London list, in spite of the growth in the general total of names, shows a falling off, only 6,420 names appearing in it, as against 6,550 last year. Similarly, the list for Ireland shows 2,656 names, which is 4 less than in the edition for 1908. In each of the other lists, however, there is a greater or smaller growth; nevertheless the provincial list for England still overtops the total of the lists for Wales, Scotland, Ireland, practitioners resident abroad, and the Naval, Military, and Indian Medical Services, all put together. Only in course of time can errors in a work of this description be discovered; but from an experience of many years' daily use it is safe to conclude that if any errors exist they are few and unimportant. We notice that the abstract of the principal laws affecting the medical profession, which is the work of Mr. R. G. Glenn, LL.B., has this year been revised by Mr. W. Oliver Hodges, and that it is well up to date.

The volume recording the Transactions of the American Proctologic Society at its tenth annual meeting is not very bulky, but contains several communications of considerable interest. In this respect the palm should, perhaps, be awarded to the discussion on the choice of an anaesthetic for use during operations on the rectum, small and great, which was introduced by Dr. J. M. Lynch, of New York. From the address of the President, Dr. A. Bennett Cooke, it would appear that rectal surgery claims in America the position of a speciality and that it is held in increasing esteem.

Those familiar with French but not with German and desirous of studying Schmidt's work on morbid conditions of the gastro-intestinal tract,[10] both functional and organic, may be glad to know that a translation by Dr. R. S. KOLBÉ is now available. It appears to be an accurate version of the original, and the methods recommended by Schmidt for the determination of the extent to which digestion and absorption are complete are all clearly described. The translation is adorned by some twenty woodcuts and three coloured plates.

The second volume of the *Archives of the Pathological Institute of the London Hospital*[11] contains ten articles on cases of special interest to the morbid anatomist and histologist. Drs. Turnbull and Worthington discuss regeneration of the liver and describe three cases illustrating the transition from regeneration to carcinoma in cirrhosis of this organ. They find that there are two elements in the liver capable of independent regeneration, namely, the cells of the lobules and the interlobular bile ducts. In two of these cases a typical regeneration of the liver cells led to the formation of cancer, and in the third, cancer was due to an aberration of the regenerative process in the bile ducts. Amongst other articles of special interest may be noted one by Dr. Turnbull on the formation of bone and marrow in the suprarenal capsule, a discussion of mesaortitis and aneurysm by Dr. Aitchison, and the description by Dr. C. H. Miller of a case of general lymphatic hyperplasia.

As an addition to the ordinary guide-books, but not in any way replacing them, a little work, *Six Weeks and the Mediterranean*,[12] may prove exceedingly useful. There are many persons of limited leisure intending a trip to the Mediterranean who would wish to spend the time at their disposal to the best advantage. As a help in this direction the present work can be recommended. How well planned was the trip described will be gathered from the fact that in addition to calling at Gibraltar and Algiers, it allowed of one day being spent at Genoa, four days at Naples, seven hours at Messina, eighteen hours at the Piraeus, eleven hours at Smyrna, and a day at Constantinople. The fortnight spent in Egypt was sufficient to afford several days in Cairo and a trip up the Nile as far as Luxor. On the return journey time allowed of several hours being spent at both Naples and Marseilles. It would seem difficult to improve upon the scheme of this trip as regards the variety and interest of the places visited in the short space of six weeks. The author writes clearly and well, and his book is profusely illustrated with excellent photographs; these last, indeed, are worth considerably more than the modest sum charged for the little work.

[8] *Hygiene and Public Health.* By B. A. Whitelegge, C.B., M.D., F.R.C.P., and George Newman, F.R.S.E. New and revised edition. London: Cassell and Company. (Fcap. 8vo, pp. 650. 7s. 6d.)

[9] *The Medical Directory for 1909.* London: J. and A. Churchill. 14s. net.

[10] *L'examen fonctionnel de l'intestin par le régime d'épreuve.* Par le Dr. A. Schmidt. Traduit par le Dr. R. S. Kolbé. Paris. 1908. Pp. 881.

[11] *Archives of the Pathological Institute of the London Hospital.* Vol. ii. London: Adlard and Son. 1908. (Roy. 8vo, pp. 187; 22 plates.)

[12] *Six Weeks and the Mediterranean.* By "Passenger." London: George Philip and Son, Limited. 1908. (With illustrations and charts pp. 186. Price 1s.)

MEDICAL AND SURGICAL APPLIANCES.

A Syringe for Intramuscular Injections.

DR. HENRY FITZGIBBON, M.D., sends the following description of an all-glass syringe with stopper: I have now been for upwards of thirty years Visiting Surgeon to the Government Westmoreland Lock Hospital in Dublin, and during that extended period I have resorted, both in hospital and private practice, to all of the various recognized methods of treating syphilis, and of late years in all suitable cases I select to treat uncomplicated cases by intermuscular injections of mercurial cream prepared according to the formula given by Colonel F. J. Lambkin at page 26 in his book on the treatment of syphilis, published in 1905. I have now treated a very large number of cases by this method, with most satisfactory results as to apparent complete and rapid cure, and with absolute immunity from any local or constitutional disturbance whatever beyond the rare occurrence of a temporary painful nodule at the point of injection; when this has happened it was due to either a portion of the cream leaking back into the subcutaneous tissue between the nozzle and the skin, or to my having omitted to massage the part sufficiently at the time of the injection. The cream I use is especially prepared by Mr. J. I. Bernard, 26, Clare Street, Dublin. He dispenses the drug in glass tubes, each of which contains about 40 minims, equivalent to eight doses of 5 drops each. These tubes are a complete safeguard against precipitation of the mercury, as they are hermetically corked and absolutely full: their contents are easily transferred into an all-glass syringe without any

loss by means of a glass piston-rod supplied with each box for the purpose. I have designed an improvement upon the all-glass syringes hitherto in use, which, when only one or more injections have been made from it, enables it to be converted into a perfectly air-tight reservoir for the preservation of what remains in it free from atmospheric deterioration or pollution of any kind until it is required again for use. This is accomplished by replacing the

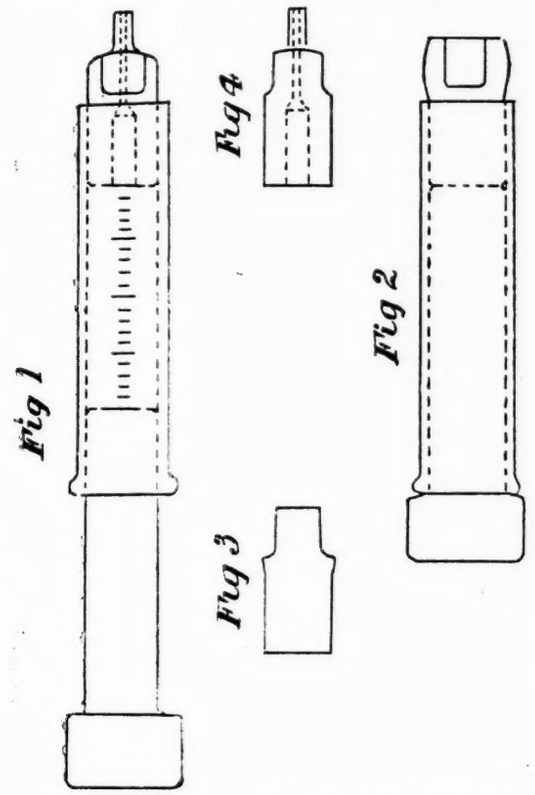


Fig. 1 represents the syringe full, with needle plug in.
Fig. 2 represents the syringe empty, with stopper in.
Fig. 3 represents the stopper separately.
Fig. 4 represents the needle plug separately.

nozzle plug, together with the needle, by a glass stopper made to fit the cylinder accurately. The plug and needle may be sterilized by boiling at once, so as to be ready for use again without delay when required. The use of this all-glass reservoir syringe has proved an enormous saving of time to me in the treatment of cases with intermuscular injections of mercurial cream, and I have no doubt that if adopted for the preservation of the soamin solution—recommended by Colonel Lambkin, R.A.M.C. (BRITISH MEDICAL JOURNAL, August 15th, p. 391)—it will be found of equal, if not greater, practical use, as the fluid will be preserved in an absolutely air-tight reservoir from one injection until another is required, and thus avoid the necessity of making a fresh solution for each individual case. The engraving illustrates the syringe, with the interchangeable stopper and needle plug. When a portion of the contents of the syringe has been injected, or when it is desired to have the syringe charged and kept ready for use, the needle plug has only to be removed and the stopper substituted for it, care of course being taken to push up the fluid so that there is no air intervening between it and the stopper when driven home.

A Urethral Ointment Introducer.

Dr. N. WALMISLEY (London, W.C.) writes: For the last five months I have been using an instrument for applying ointment to inflamed patches of the urethra with much success. I designed the instrument; it consists of a flexible catheter about 4 in. to 5 in. long, with an acorn-shaped tip. There is a hole at the tip only. The catheter, by means of an intermediate piece, is screwed on to a collapsible tube which contains ointment, and the ointment enters the urethra by pressing on the tube. After use the whole catheter is screwed into a firm cover, which keeps it clean and prevents the ointment coming out. I found it useful in the case of patients who could only attend occasionally, the inflamed parts being located by the urethroscope, and the patients only applied the ointment to those parts as I instructed them. Mr. Beaton, 14, England's Lane, Belsize Park, N.W., has kindly made the instrument for me.

BRITISH MEDICAL BENEVOLENT FUND.

AT the December (1908) meeting of the committee twenty-three applications were received, and sums amounting to £205 voted in relief, six cases being passed over. Appended is an abstract of the cases assisted:

1. Daughters, aged 50 and 34, of late M.R.C.S., L.S.A. For the last ten years have been compelled to nurse their invalid father, an annuitant of this Fund and of Epsom College; are now endeavouring to obtain employment. Voted £20.
2. Daughter, aged 29, of late M.R.C.S., L.S.A. Is unfitted for anything but housework, and is one of several sisters just left quite unprovided for. Voted £10.
3. Widow, aged 68, of M.D. Quite unprovided for at husband's death, and unable to any longer obtain post as a housekeeper or companion. No children. Voted £12.
4. M.D.Aberd., aged 76. No income, and nearly blind. No children; has been suddenly deprived of help from relations. Voted £18.
5. Widow, aged 58, of M.R.C.S., L.S.A. Husband has recently died, and furniture has been sold to meet pressing liabilities, which proceeds of the death vacancy if sold will not cover. Six children, but only able to give very slight help. Voted £12.
6. Widow, aged 60, of L.F.P.S.Glas. Left without provision at husband's death several years ago, and has hitherto supported herself by acting as nurse companion or housekeeper. No children. Voted £12.
7. Daughter, aged 61, of late M.D.Edin. No means. Used to maintain herself as a governess, but for the last few years has been compelled to devote all her time to an invalid sister. Slight help from friends. Relieved three times, £36. Voted £12.
8. Widow, aged 34, of M.B., C.M.Glasg. Income £18 a year. Is acting as nurse at a provincial hospital, but only receives £5 as salary for the first year. Two children, aged 12 and 11, both at an institution, but obliged to be removed before the holidays on account of an outbreak of diphtheria. Relieved three times, £20. Voted £10.
9. Widow, aged 49, of L.S.A. Since husband's death has endeavoured to support herself by giving music lessons and letting rooms, but has been obliged to use a small legacy left by an aunt a few years ago and now exhausted. Two daughters, aged 15 and 14. Relieved twice, £20. Voted £10.
10. Wife, aged 39, of M.R.C.S., L.R.C.P., who is confined in a county asylum. No income; receives £1 a week as a district nurse, but has to pay her rent and other unavoidable expenses. Three children, the youngest only 3. Relieved once, £12. Voted £12.
11. Daughter, aged 49, of late M.R.C.S., L.S.A. Is a trained nurse but has been in bad health for the last few years and for some months past has been quite incapacitated. No income. Relieved once, £5. Voted £10.
12. M.R.C.S., L.S.A., aged 63. For the last few years has endeavoured to support himself by locumtenencies, but has recently been incapacitated by ill health for some months and is now only able to undertake quite light work. Two sons only earning a small weekly wage; wife is endeavouring to establish a boarding house. Relieved once, £10. Voted £10.
13. M.R.C.S., aged 65. For the last two years has been incapacitated by serious heart disease. No income; only very slight help from children; wife receives paying guests. Relieved twice, £30. Voted £18.
14. Widow, aged 64, of M.R.C.S.Eng., L.R.C.P.Edin. Only income £20 a year from a house, the lease of which expires in a few years' time, and to which expensive repairs have been necessary. Relieved nine times, £102. Voted £12.
15. Daughter, aged 64, of late M.D.Lond. Has supported herself for several years by work of different kinds, but finds it increasingly difficult to get. Relieved once, £5. Voted £5.
16. Daughter, aged 62, of late M.D.Edin. Has maintained herself for many years, but now unable to do so on account of defective eyesight. Receives a little help from a fund for poor ladies. Relieved four times, £46. Voted £12.
17. Widow, aged £50, of L.R.C.S.Edin. Quite unprovided for at husband's death. Maintains herself by letting lodgings, with slight help from a son and daughter, but has had her rooms unoccupied for some months during the summer. Relieved three times, £25. Voted £10.

LYNN THOMAS AND SKYRME FUND.

TWENTY-FIRST LIST OF SUBSCRIPTIONS.

MR. WILLIAM SHEEN, M.S., F.R.C.S., 2, St. Andrew's Crescent, Cardiff, honorary secretary of this fund, desires to acknowledge the following subscriptions:

Subscriptions to December 22nd, 1908.

	£	s.	d.
D. C. Muir, Cwmtillery, Mon.	5	5	0
Newport (Mon.) Medical Society, per V. A. Crinks ...	1	1	0
Ernest Hunt, Newton Abbot	0	10	6
W. B. Felton, St. Newlyn East, Cornwall... ...	0	10	6
R. G. Murray, London...	0	10	0
"Ewyllysgar"	0	5	0
James Blamey, Penryn, Cornwall	0	5	0

COMPENSATION FOR INDUSTRIAL DISEASES.

THE recommendation contained in the *Second Report of the Departmental Committee on Compensation for Industrial Diseases*[1]—that cataract in glassworkers, telegraphists' cramp, and a wider application of the term "eczema," should be included in the schedule of industrial diseases for which compensation may be claimed—is a most interesting contribution to the subject of diseases of occupation.

GLASSWORKERS' CATARACT.

Glassworkers' cataract has been discussed at meetings of the British Medical Association, and has received very careful consideration in our columns on various occasions. We would mention specially the valuable contributions of Mr. Simeon Snell and Dr. William Robinson. Mr. Snell's investigation led him to the belief that while cataract occurred in glassworkers as in other trades, there was not sufficient evidence, at the time he concluded his inquiries, to warrant the opinion that the disease was unduly prevalent among them. Dr. Robinson, on the other hand, came to the conclusion that the disease was more liable to appear in glassworkers (particularly bottle-finishers) than in the rest of the population. Continental experts, such as Meyhofer, Rohlinger, J. Hirschberg, and E. Cramer, favour the view that cataract in glassworkers is in excess of the normal. Dr. Legge reports that all glassworkers who are exposed to incandescent molten glass suffer, and that changes in the lens are about five times as frequent in glassworkers between 30 and 40, twice as frequent in those between 41 and 50, and over three times as frequent in those over 50, as in other persons.

Of the different grades of glassworkers it is worth noting that "gatherers" in sheet glass are apparently least affected. A "gatherer" is an apprentice, or at any rate a young man; his duty is to dip the pipe into the molten metal to take up the required amount; he looks into the tank each time he "gathers," and his face frequently becomes blistered by the heat. His youth and the fact that he is compelled to shield his face from the intense heat may explain his comparative freedom.

As to the form of the cataract, Dr. Robinson states that it begins as a posterior cortical cataract, and that it differs from the ordinary posterior cortical cataract in that at its commencement it is cobweb-like and saucer-shaped. It is best seen by direct examination with a + 10 or + 12 lens; the outline is irregular, neither radial nor rosette-shaped. When removed, sight is good, but the workman is rarely able to resume work as a "finisher" on account of loss of accommodation.

In regard to the etiology of the condition, there does not appear to be, as yet, sufficient data to permit the formation of any positive opinion as to whether heat rays or light rays, or both, are to be set down as the cause.

We look forward to an authoritative verdict on this matter from the Committee of the Royal Society, which is considering the question of causation and its corollary, prevention.

A most noteworthy point in the recommendation is that which compels the workman to undergo an operation in order to receive compensation, the wording being that "cataract in glassworkers" be added to the first column of the schedule, and "processes in the manufacture of glass, involving exposure to the glare of molten glass" be added to the second column, and that compensation should be payable only in cases in which an operation is undergone, and for a period not exceeding six months. This compulsion to have an operation is an entirely new departure in the business of compensating the industrial wounded. It is one which will in all probability be extended in the near future. Judicial tribunals have mostly felt themselves unable to take the responsibility of ordering an operation to be carried out, and the experiment of including such a stipulation in an Act of Parliament will be watched with the very greatest attention.

TELEGRAPHISTS' CRAMP.

The addition of telegraphists' cramp to the schedule is a measure of justice to a hard-worked body of public servants. The symptoms of pain, discomfort at work, and the signs of spasm, tremor and weakness make their appearance just when the officer has reached the stage of perfection in manipulation of the Morse key instrument; it does not develop during the period of learning, when the muscular effort and attention are greatest.

The disorder is to be distinguished from such conditions as local muscular weakness, neuritis, rheumatism, nervous diseases. The most pathognomonic sign is recorded on the Morse signalling slip; this shows jerkiness and illegibility. It appears that about 2.75 per cent. of the total staff employed in telegraphy is affected with the disease, and it is more than doubtful if it is curable. Once it is established, the operator will be compelled to find other employment, for he becomes unreliable and may cause disastrous mistakes in his messages.

In view of the fact that the postal medical officer has the advantage of knowledge of telegraphists' work, he is substituted for the certifying factory surgeon as the person by whom, in the first instance, the disease is to be certified.

Cases which occur in other employments than that of the Postmaster-General are left to the ordinary procedure provided by the Acts.

DERMATITIS FROM IRRITANTS.

The widening of the definition of eczematous ulceration in the schedule is intended to settle the question whether laundry women, who suffer by the irritation produced on their hands and arms by the alkaline solution with which they work, are included in the terms of the definition. There can be no doubt now that these are included, and it is certain that cases will arise due to working with liquids in other employments, it being necessary to establish the fact that the conditions of employment are the exciting cause of the eczematous ulceration. The description of the disease or injury will now read:

> Eczematous ulceration of the skin produced by dust or liquids, or ulceration of the mucous membrane of the nose or mouth produced by dust.

By an order dated December 2nd, the Home Secretary has added cataract in glassworkers and telegraphists' cramp to the list of diseases in respect of which compensation is payable.

[1] London: Wyman and Sons; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. 1908. 7½d.

AUSTRALASIAN MEDICAL CONGRESS.

(Continued from p. 1760.)

WORK IN THE SECTIONS.

Medical Section.

DR. TAIT SUTHERLAND stated that chloroform was specially dangerous in any form of anaemia, and advised that in all such cases requiring a general anaesthetic the ethyl-chloride-ether sequence should be followed. Dr. ZWAR, in a paper on spinal anaesthesia, noted that unpleasant sequelae were far more frequent than was generally supposed to be the case. In a discussion on syphilis which arose in the Medical Section, it was observed that many conditions which were claimed by the pathologists to be syphilitic had not been found to be so. It was clinical evidence that established syphilis as the basis of ascending degeneration of the cord, and not pathological evidence, and the dictum of the pathologists that all arterial degeneration was syphilitic could not be accepted. Dr. J. F. WILKINSON read a very interesting paper on modern methods in the diagnosis of gastric disorders, demonstrating the simplicity with which the general practitioner could ascertain himself the character of the gastric contents, particularly as to the presence or otherwise of free hydrochloric acid. He favoured the dimethylamidoazobenzol, the sodiumalizarinsulphonate, and the phenolphthalein tests. Dr. J. W. SPRINGTHORPE, in a paper on blood pressure in disease, stated that the record given by Martin's haemodynamometer represented simply the amount of pressure required to prevent the brachial pulse wave from reaching the corresponding radial artery. It did not represent the mean systolic pressure, the arterial expansion, or the local condition of blood-vessels, or circulation. It was no certain index of cardiac muscularity, arterial elasticity, nervous control, or peripheral resistance. It was simply a numerical record of what the fingers should observe, educationally suggestive, but not conclusive. It had no direct diagnostic value nor was it pure prognostic. People

died with a lower blood pressure than normal' and live with perhaps one that used to be called dangerous. It did not vary in any definite ratio with temperature' pulse, or nervous stimulation. It might vary considerably with meals and show its maximum when a failing heart was fighting against extensive peripheral resistance. It appeared unusually low in pneumonia, typhoid, and influenza, but cases with a blood pressure never above 70 had gone through severe attacks successfully without any special treatment. It had not been found to be of definite value in the selection of an anaesthetic. It ranked thus with the sphymograph and similar instruments of precise record. Like them it required expert interpretation and experience before basing action upon it. Dr. JULIAN SMITH, in a paper on tuberculo-opsonins, emphasized their value. The general opinion of the section was that vaccine therapy could be quite as efficiently carried out without resorting to such a cumbersome and time-absorbing process as taking the opsonic index was. It was admitted, however, that opsonin work had taught much as to the value of vaccines, and the consensus of opinion was that vaccine treatment with steadily increasing dosage was of immense value in surgical and genito-urinary tuberculosis, but that its position in pulmonary tuberculosis had yet to be ascertained. Sanatorium treatment was shown to be very effective under the climatic conditions of Australia.

Physiology and Pharmacology.

Two meetings of the Subsection of Physiology and Pharmacology were held, and a number of papers of varied interest were read and discussed. Dr. H. G. CHAPMAN (Sydney) gave the results of his investigations on the pharmacology of strychnine, and showed that in animals of the genus Hyla, this drug had a curare action as well as the normal action on the cord. A second paper by the same author dealt with the acid reaction of fresh milk. It was due not to lactic acid but to acid phosphates and caseinogen. Dr. KILVINGTON (Melbourne) communicated the results of his recent work on nerve regeneration, and showed how important such considerations were in the surgical treatment of certain paralyses. Miss KINCAID, B.Sc. (Melbourne), gave the results of her analyses, chemical and calorimetric, of the flesh of the rabbit and crayfish. From the standpoint of caloric value and percentage of protein, carbohydrates, and fat, rabbits' flesh had a high nutritive value, but the small amount of extractives present probably prevented this foodstuff from entirely replacing meat. Mr. SYME JOHNSON (Melbourne) found in two samples of 24-hour urine from a case of myasthenia gravis that the kreatinin and phosphate content was abnormally low. Dr. ROTHERA (Melbourne) demonstrated a delicate and reliable test for acetone in urine, which depended on the colour developed on addition of nitro-prusside of sodium, ammonia and ammonium sulphate. Papers of more technical interest were the existence of a limen in chemical stimulation, by Dr. MARGARET JAMIESON (Melbourne), and the elasticity of rubber balloons and hollow viscera, by Professor OSBORNE (Melbourne).

Section of Surgery.

At the first meeting of the Section of Surgery a discussion on the surgical diseases of the bile passages and pancreas was opened by Dr. ANSTEY GILES (Adelaide), who dealt chiefly with technique. Dr. CRITCHLEY HINDER (Sydney) followed with remarks on the diagnosis of the different conditions calling for operation, and the cause of some of the symptoms, particularly the pain of so-called biliary colic, which he regarded as due mainly to distension of the gall bladder, or occasionally to adhesive peritonitis. The symptoms of so-called "biliousness" were due, he said, to toxic absorption, partly cholaemic, partly of toxins formed by organisms. The absence of jaundice was of no value in diagnosis. In the discussion Drs. FIASCHI, MAITLAND, BOWKER (all of Sydney), DUNCAN (Kyneton), COOKE, BIRD, MOORE, SYME (all of Melbourne), JACKSON (Brisbane), and RAMSAY (Launceston) spoke, and chiefly differed as to the advisability of performing cholecystectomy.

In the afternoon a combined meeting of the Sections of Surgery and Gynaecology was held to discuss the surgical treatment of septic peritonitis, opened by a paper by Dr CHISHOLM (Sydney), and followed by Drs. DUNCAN, HINDER, FIASCHI, BOWKER, MAITLAND, WORRALL, J. A. G. HAMILTON, SYME, MOORE, and THRING. The chief points discussed were the value of flushing the cavity and of saline rectal infusions by Murphy's plan. All agreed as to the necessity of early diagnosis and drainage, but great diversity of opinion existed on all other points.

On the second day a discussion was held on the surgery of non-malignant diseases of the stomach, opened by Dr. W. H. BROWN (Colac), who strongly advocated excision of ulcers rather than gastro-enterostomy, in cases where there was no obstruction, and detailed his method of technique. He also advocated gastro-enterostomy in acute dilatation. He was followed by Dr. FIASCHI, who summarized the results of all his cases, giving a tabulated statement. Dr. RAMSAY discussed the various methods of technique and the cases requiring operation. Dr. BIRD questioned the value of gastro-enterostomy in cases of very greatly dilated stomach. He did not approve of gastro-enterostomy in cases of perforated gastric ulcer. Dr. HINDER still used anterior gastro-enterostomy, and found it satisfactory. He frequently used the Murphy button. He did not approve of operation in acute dilatation of the stomach. He had done gastro-enterostomy in cases of perforated gastric ulcer, with good results. Dr. BOWKER also used the anterior method, and found Harrington's rings a valuable aid. Dr. MAITLAND had formerly done anterior, but now performed the posterior, no-loop gastro-enterostomy, and his results were equally good with each. Excision of ulcers was good in theory, but disappointing in practice. He would operate for acute haemorrhage. Dr. JACKSON referred to the diagnosis of neurasthenic conditions, and found if cases were not improved by rest and simple treatment, they were neurasthenic. He had given up Murphy's button. Dr. MOORE thought it necessary to suture the opening in the meso-colon, and had two cases of intestinal obstruction from small intestine passing through the opening. Dr. SYME discussed the treatment of hour-glass stomach. In greatly-thickened ulceration he had seen haemorrhage a considerable time after gastro-enterostomy, and advocated a partial gastrectomy for such cases. He had operated for acute haemorrhage, but it was exceptional to do so.

On Thursday afternoon Dr. MAITLAND read a paper on the use of the cystoscope in obscure renal disease; illustrated by cases. Dr. DUNHILL gave his experiences in the surgical treatment of exophthalmic goitre, based on 47 thyroidectomies for this condition. He is an enthusiastic advocate of the operation, and objects to crushing the gland, which, he says, can be cut with impunity. Dr. HINRICKSEN read a paper on Bier's hyperaemia in acute inflammation, which he had found very satisfactory. At the last meeting a discussion on the surgery of nerves and paralysis was opened by Dr. BASIL KILVINGTON, who very modestly related the results of his original investigations, and discussed the cases of infantile paralysis most suitable for treatment by operation on nerves, and those most suitable for tendon transplanting. Dr. H. S. NEWLAND followed on much the same lines, giving, however, great credit to Dr. Kilvington's work. Dr. DUNCAN contributed a paper on the treatment of facial neuralgia, especially with reference to the removal of the Gasserian ganglion; and Dr. O'HARA demonstrated a new method of approaching and removing the Gasserian ganglion. Dr. E. S. JACKSON read a paper on the association between dental caries and appendicitis, maintaining that dental caries favoured the occurrence of appendicitis, and appealing for more care in preventing teeth troubles. Mr. R. HAMILTON RUSSELL exhibited a series of surgical cases possessing unique interest at the Alfred Hospital. Among these were two cases of bone implantation. In the first case, a severe compound fracture of the skull, a portion of the frontal bone was replaced nine days after its removal; in the second case a portion of the ulna affected with myeloid tumour had been removed, and a portion of an ulna removed from a corpse substituted. In both cases the result attained was perfect. He also showed the result of an operation devised for deformities of the arm resulting from removal of a portion of the radius some years previously; and a series of cases of tuberculosis of the knee-joint operated upon by his method of anterior longitudinal incision through the patella.

Diseases of Children.

A Section for Diseases of Children was included in the programme of the session held in Melbourne eighteen years ago, but the attendance of members was so small that the section was omitted from all subsequent sessions until the present one. On this occasion it proved to be one of the most attractive sections in the Congress. The members of the honorary medical and surgical staff gave demonstrations each morning and exhibited a large number of cases. The President was Dr. A. JEFFERIS TURNER (Brisbane), and the Secretary Dr. A. JEFFREYS WOOD. The first morning was devoted chiefly to the exhibition of cases of congenital and acquired syphilis in children, and the proneness to the ravages of tubercle in congenital syphilitics was well illustrated. A number of cases of obstetrical brachial palsy were also shown, and the good results following operative treatment were shown by several cases. An interesting group of 4 cases from one family suffering from this form of paralysis was also shown. Clinical demonstrations were given on cases of syringomyelia, pseudo-hypertrophic paralysis, congenital malformity of the heart, chorea, and bronchopneumonia. Papers were read on congenital syphilis by Drs. ATKINSON WOOD and P. B. BENNIE, and a discussion followed. A most instructive paper on lead poisoning in childhood was read by the President, Dr. JEFFERIS TURNER of Brisbane. After lunch the Section met in conjunction with the Section for Neurology and Psychiatry at the Children's Hospital, and a large number of cases of mental deficiency in childhood were shown. Children with spastic paraplegia the result of meningeal haemorrhage and of encephalitis were demonstrated. A large number of Mongolian imbeciles were included amongst the cases, and one little girl of 8 months with the characteristic signs of this form of imbecility was shown side by side with her twin brother, who was absolutely normal in every way. The sporadic cretins formed a very interesting group, as they included some cases that had been under treatment as long as ten years, and were still taking thyroid. The best of these was a girl of 12 years old, who was in the fourth class of a State school, and was beginning to show signs of commencing puberty. No one talking to this child would have imagined that she had been a marked case of sporadic cretinism unable to walk at the age of 4 years, when she first came under treatment. Dr. A. W. CAMPBELL of Sydney concluded the demonstration with a masterly and instructive lantern demonstration of the brain in amentia.

On Wednesday, October 21st, Dr. W. KENT HUGHES commenced the demonstration by reducing a case of congenital dislocation of the hip. Numerous cases of successful reductions of these hips were on exhibition, and the skiagrams shown left no room for doubt as to the perfect results obtained by the bloodless reductions. A lantern demonstration by Dr. HUGHES on the anatomy and treatment of talipes equino-varus, and another by Dr. H. M. HEWLETT of some interesting medical and surgical cases, were much appreciated by members. Dr. A. JEFFREYS WOOD read a paper on the treatment of congenital dislocation of the hip.

On Thursday morning, October 22nd, a large number of cases of spinal caries and morbus coxae were shown by the members of the honorary medical staff. Some of the older cases shown illustrated the subsequent shortening of the whole limb that frequently results from tuberculous disease of the hip-joint. Lovett's method of forcible correction in scoliosis was demonstrated by Dr. H. DOUGLAS STEPHENS, and the plaster-of-Paris jacket applied to a patient with marked rotation. Dr. P. B. BENNIE gave a most instructive demonstration of the method he adopts in measuring a patient for a single Thomas's hip splint. A discussion on the treatment of tuberculous disease of the hip-joint was opened by Dr. CLUBBE (Sydney), who said that the treatment of this affection by Thomas's splint was confined to the Children's Hospital, Melbourne. All the members who had watched the results following the treatment of hip cases by well-fitting Thomas's splints were emphatic in declaring that as a method it was simpler and more effective than any other kind of treatment, and was especially useful in allowing the patient to be carried out into the open air. A discussion on the prevention of the introduction of infectious diseases into children's hospitals was opened by papers from Drs. W. E. SUMMONS and R. D. MCMASTER (Sydney).

Friday, October 23rd, was the last day on which the Section met, and numerous cases of infantile paralysis were shown by members of the staff. An epidemic of this disease commenced in April, 1908, and an account of it was given by Dr. H. DOUGLAS STEPHENS. The disease, he said, had been endemic in Victoria, especially in some of the suburbs of Melbourne, for some time, certainly during the last decade, and notably amongst the more densely populated portions of the metropolitan area. During the recent epidemic no relationship could be traced between it and the undue prevalence or absence of other diseases, nor was there any similar affection noticeable amongst animals. Sanitary conditions were good as a rule, but overcrowding in small houses was a common feature. The outbreak occurred in the autumn, after an exceptionally dry, warm summer—a dearth of water in the catchment area—such as had not been experienced for many years. In his opinion the disease was mildly contagious. The incubation period would seem to be somewhere between three and sixteen days, and the average duration of the invasive or preparalytic stage something under seven days, commonly twenty-four to seventy-two hours. Lumbar puncture was performed in 26 early cases and the fluid examined by the bacteriological department of the Melbourne University. In 7 cases a coccus not unlike in many features the diplococcus isolated by Geirswold in the Norwegian epidemics was demonstrated, but up to the present time its causal relationship had not been proven. *Post-mortem* examinations were made in several cases, and, although showing very little macroscopically, demonstrated clearly under the microscope the widespread inflammatory lesions described by Harbitz and Scheele. The extreme rapidity with which the anterior cornual cells disappeared was a remarkable feature. Although the great majority of cases exhibited the usual paralyses characteristic of poliomyelitis of the strictly spinal type, the epidemic produced other variations of the disease, aptly described by Batten under the terms polio-encephalitis, superior and inferior, including variations suggestive of acute cerebellar ataxia and Landry's paralysis. Of the preparalytic manifestations the commonest were fever, vomiting, irritability, restlessness, delirium, twitching, pain—sometimes severe and widespread, and occasional rigidity of spine and neck. Constipation, often very obstinate, and retention of urine of transient nature were very frequently noted. The epidemic included over 130 cases, and gave a mortality-rate of approximately 4.5 per cent. Dr. W. C. MACKENZIE read a paper on the treatment of infantile paralysis, and laid special emphasis on the usefulness of early splinting of the affected limbs with a view to prevent the overstretching of the affected muscles. Dr. R. B. WADE (Sydney) also sent a paper, which was read by the SECRETARY, dealing with a similar epidemic that occurred in New South Wales in 1903–4, and also with the treatment. The numerous forms of splints and apparatus used in helping the children to walk were exhibited. Thomas's caliper knee splint, Crabbe's splints, and the various braces all excited the keen interest of members. A few cases of tendon transplantation were shown.

UNDER the will of the late Miss Isabella Gregson, of Bournemouth, a sum of £5,000 is directed to be paid to the Children's Infirmary, Myrtle Street, Liverpool, for the endowment of five beds.

THE position of Livingstone College, as shown by the report published on December 8th, seems more satisfactory than at any time since the institution was founded some fifteen years ago. The number of new entrances during the year 1907-8 was much larger than any hitherto recorded, being an average of 30 in each of the three terms. Rather more than half the students entered for the full session and others for one or two terms. The details given as to the students show that the college remains as heretofore thoroughly undenominational. The financial statement shows that a deficiency of over £400 existing at the beginning of the year has now been wiped out, and that the working expenses of the year were practically met by the fees of the students. Nevertheless, there still remains a mortgage on the property amounting to some £3,500. Particulars of the training in medical matters afforded to missionaries can be obtained on application to Dr. C. F Harford, Livingstone College, Leyton.

THE COMPOSITION OF CERTAIN SECRET REMEDIES.*

XXII.—MEDICINES FOR GENERAL USE.

By far the greater number of the proprietary medicines which have been described in this series of articles are recommended for a wide range of ailments, but usually there is some one disease for the treatment of which they are particularly recommended, so that it has been possible to classify them according to their alleged purposes. In very many other cases, however, the claims made are so wide that the article is put forward as a sort of cure-all. A selection of such preparations is here dealt with; they are not sharply marked off from more special preparations, for many of them are recommended for some one disease, of which nearly all others are asserted to be variations.

DR. MARTIN'S MIRACLETTS.

Supplied by Dr. Martin's Medicine Co., 6, Panton Street, Haymarket, London, S.W.

Price 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. per bottle. A 2s. 9d. bottle contained sixty tablets.

These are described on the package as:

A real Elixir of Life in solid form. The world's greatest remedy.

Cures Constipation, Indigestion, Headache, Neuralgia, Anaemia, Nervous Disorders, Liver Troubles, Rheumatism, Sciatica, Gout, St. Vitus' Dance, Hysteria, Rickets, Heart Disease, Kidney Complaints.

Cures Melancholia, Loss of Appetite, Sleeplessness, Lassitude, Mental Depression, Brain Fag, Palpitation, Stomach Disorders, Women's Special Ailments and Irregularity of Health, etc., etc.

A little booklet entitled "A Fortune for All" was enclosed in the package; the following are extracts from this:

Dr. Martin has been studying this question of Perfect Health for the last nine years, and after continuous experiments which have cost a small fortune, he has succeeded in discovering a remedy which he claims to be the most WONDERFUL in the WORLD. Having found the remedy Dr. MARTIN has for the last six months given away a large quantity to various people in all conditions of life, with the result that the most *astounding and marvellous* cures have been effected.

Dr. Martin's Miracletts are a REAL ELIXIR OF LIFE in solid form. They arrest decay of nature, act upon the blood and tissues of the body, giving one a continually youthful appearance, with every attribute of health, strength, and beauty.

Whatever you may be suffering from do not worry or fear, as Dr. MARTIN'S MIRACLETTS will be certain to cure you!

Dr. Martin's Miracletts make the weak and sickly become strong and healthy, and the aged become youthful and full of energy; the tired worn out look being replaced by an appearance of cheerfulness and vivid health. The pale and wrinkled face with bad complexion gives way to rosy cheeks and a clear skin; the thin gain flesh, and the stout lose superfluous fat; indigestion quickly disappears, the appetite returns, and a *new life* is open to all.

A separate small slip enclosed in the package is worded as follows:

GUARANTEE.

Dr. Martin's Medicine Company being absolutely confident of the marvellous curative properties of their Miracletts, will willingly refund the money to any purchaser who has taken eighteen Miracletts according to directions, and is not satisfied with the results.

Much less conspicuously, on another slip chiefly devoted to the relative quantities in the packages of different size, it is stated:

Those whose ailments have been of long standing must not expect immediate perceptible results, but with a little patience and perseverance the result is SURE.

The directions are:

For Adults.—In ordinary cases one Miraclett should be taken after each meal three times a day. For obstinate and extreme cases of constipation two Miracletts may be required three times a day.

For Children.—For children over ten years one Miraclett only should be taken after the last meal at night.

The "Miracletts" consisted of sugar-coated tablets, the coating being coloured brown with ferric oxide (so-called chocolate coating). After removal of the coating they had an average weight of 4.3 grains; this includes the weight of a strong coating of varnish, which was not removed with the sugar coating. Analysis showed them to contain valerianates of quinine and zinc, ferric oxide, menthol, kaolin in considerable quantity, and a little talc. A substance of extract nature was also present to the extent of about 5 per cent.; it possessed no characteristic taste or other property by which it could be identified; a resinous substance which was found in small quantity appeared to be merely the varnish with which the tablets were covered. The quantities of the different ingredients were determined as nearly as possible, and the results indicated the following amounts:

Quinine valerianate	...	0.4 grain
Zinc valerianate	...	0.1 ,,
Ferric oxide	...	0.3 ,,
Menthol	...	0.03 ,,
Kaolin and talc	...	2.3 grains

In one tablet.

Estimated cost of ingredients of tablets, 4d. per hundred.

THERAPION No. 3.

Prepared by the Le Clerc Medicine Company, London, England.

Price 2s. 9d. per package, containing 1⅓ oz.

The following is a sample of the advertisements of this preparation:

A Broken Down System.

This is a condition (or disease) to which doctors give many names, but which few of them really understand. It is simply weakness—a breakdown as it were of the vital forces that sustain the system. No matter what may be its causes (for they are almost numberless) its symptoms are much the same, the more prominent being sleeplessness, sense of prostration or weariness, depression of spirits, and want of energy for all the ordinary affairs of life. Now what alone is absolutely essential in all such cases is increased vitality—vigour—

Vital Strength and Energy,

to throw off these morbid feelings, and as night succeeds the day this may be more certainly secured by a course of

The New French Remedy,
Therapion No. 3,

than by any other known combination. So surely as it is taken in accordance with the directions will the shattered health be restored,

The Expiring Lamp of Life Lighted Up Afresh,

and a new existence imparted in place of what had so lately seemed worn, "used up," and valueless. This wonderful medicine is suitable for all ages, constitutions, and conditions, in either sex, and it is difficult to imagine a case of disease or derangement, whose main features are those of debility, that will not be speedily and permanently benefited by this never-failing recuperative essence, which is destined to cast into oblivion everything that had preceded it, for this widespread and numerous class of human ailments.

In a pamphlet which is enclosed in the package similar statements to the above are made, together with others which indicate that the medicine is primarily intended for loss of sexual power, and followed by a dissertation on "Venereal Excesses and their Consequences." "Therapion No. 1" and "Therapion No. 2" are also described, the former as

the most efficacious remedy ever discovered for the removal of all discharges in either sex,

and the latter as

the great remedy for impurity of the blood, scurvy, pimples, spots, blotches, pains and swellings of the joints, gout, rheumatism, syphilis, etc.

The directions are:

For *either* No. of Therapion a piece about the size of a small marble, as indicated herewith, should be taken three or four times a day—an hour *or less* after meals.

The contents of the 2s. 9d. package are referred to as twenty ordinary adult doses; at this rate one dose would be 30 grains. The substance consisted of a dark stiff paste smelling strongly of camphor. Analysis showed it to contain, in addition to camphor, glycerine, powdered liquorice, a bitter extract agreeing in all respects with extract of gentian, calcium glycerophosphate, and a trace of alkaloid; there also appeared to be a second extract present. The alkaloid, which amounted to 0.06 per cent. only, could not be identified with any of the ordinary medicinal alkaloids. There was some evidence that the second extract was that of damiana, and a paste made up

* Previous articles of this series were published in the following issues of the BRITISH MEDICAL JOURNAL:—1904, vol. ii, p. 1585; 1906, vol. ii pp. 27, 1645; 1907, vol. i, p. 213; vol. ii, pp. 24, 160, 209, 393, 530, 653; 1908, vol. i, pp. 833, 942, 1373; vol. ii, pp. 86, 505, 1022, 1110, 1193, 1285, 1566, 1697, 1875.

with this and the other ingredients agreed well with the original; but extract of damiana possesses no distinctive characters by which it can be identified in a mixture. Quantitative determinations were made of those ingredients capable of it, and the proportions of the others estimated by comparison. The results indicated the following formula:

Camphor	2.5 parts
Glycerine	24 ,,
Powdered liquorice	40 ,,
Calcium glycerophosphate	1.8 ,,
Extract of gentian	5.0 ,,
Extract of damiana (?)	8 ,,
Alkaloid	0.06 ,,
Water to	100 ,,

In addition, there appeared to be present a slight trace of the oil of one of the umbelliferous fruits, probably anise or fennel. Disregarding the trace of alkaloid, the estimated cost of ingredients for 1¾ oz. is 2d.

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE.

Sold by the Dr. Williams Medicine Company, 46, Holborn Viaduct, London, E.C. Manufactured in the United States of America. Price 2s. 9d. per box, containing 30 pills.

These pills are advertised for a great variety of diseases, prominence being usually given to one disease in each advertisement; thus four long advertisements appearing simultaneously in different papers are respectively headed:

Afraid of being touched. So sore with Rheumatism. A once-crippled victim tells how Dr. Williams' Pink Pills cleansed his system of Rheumatism.

Eczema expelled. Mr. John Chamberlain tells how his sufferings from Skin Disease were cured by Dr. Williams' Pink Pills.

Sciatica's Swift Pains rendered this Lady helpless. Her case had defied treatment, but Dr. Williams' Pink Pills succeeded by curing the cause of Sciatica.

The Dark Days of Dyspepsia. . . . Dr. Williams' Pink Pills go to the very cause of the mischief.

Each includes a long description of a "case," usually with a picture. The following is from the concluding paragraph of the first of these advertisements, and the others end in a similar way:

THE DR. WILLIAMS' WAY.

When the muscles and nerves are tortured by poisons in the Blood, be the result Rheumatism, Sciatica, or Lumbago, the only way to a cure is to Enrich and Purify the Blood. Dr. Williams' Pink Pills, in this way alone, have cured not only Rheumatism, but Anaemia, Indigestion, Palpitations, Influenza's After-Effects, Eczema, Sciatica, St. Vitus' Dance, Spinal Weakness, the many forms of Nervous Disorders dreaded by men; also the special ailments of women.

In a circular enclosed in the package it is stated that

The success of this remedy lies in the recognition of the controlling influence of the blood over the health of the body. It is the root of disease that must be attacked, and the most important development of modern medical science has been in discovering that, in most diseases, this lies in the condition of the blood. If the blood is thin and poor, the nerves cannot receive their proper nourishment, the system becomes run-down, and in a condition to invite disease. Build up the blood, restore the worn-out nerves and you remove the cause. Dr. Williams' Pink Pills for Pale People contain elements necessary to give new life and richness to the blood.

General Directions.—*Before beginning to take these Pills, cause the bowels to be freely opened by laxative or purgative medicines.* . . . It is best to begin with one of Dr. Williams' Pink Pills after each meal, commencing the use of the medicine after a mid-day meal. Being stimulating, it is best not to take them on an empty stomach. After taking for a few days the number may be increased to two Pills at a dose, while in severe cases three may be taken at a time.

The pills were ovoid in shape and coated with sugar, coloured pink; after removal of the coating they had an average weight of 3 grains. Analysis showed them to contain ferrous sulphate, potassium carbonate (these two having reacted more or less completely, and about one-third of the iron having become oxidized to the ferric state), magnesia, powdered liquorice, and sugar. Since it has been stated that these pills contain arsenic, careful search was made for it, but it was not found. The pill is thus merely one of the many variations of Blaud's pill. The quantities of the different ingredients found indicated the following formula:

Exsiccated sulphate of iron	0.75 grain
Potassium carbonate, anhydrous	0.66 ,,
Magnesia	0.09 ,,
Powdered liquorice	1.4 ,,
Sugar	0.2 ,,

In one pill.

Estimated cost of ingredients for 30 pills, one-tenth of a penny.

BEECHAM'S PILLS.

Prepared by Thos. Beecham, St. Helens, Lancs.

Price 1s. 1½d. per box, containing 56 pills.

These pills are very widely advertised in a variety of ways. The following is a specimen of the statements made:

Ordinary medicines begin at the wrong end, only correct symptoms. People take headache powders for headaches, blood medicines for the blood, and nerve remedies for nervousness, when they only need Beecham's Pills to tone up the digestive organs, the liver and the kidneys, and so keep the whole system in a healthy condition.

In a circular wrapped round the box it is stated that:

These renowned pills are composed entirely of MEDICINAL HERBS, and are warranted free from mercury or other poisonous substance. . . . Persons of a strong or average constitution, but who may temporarily be suffering from any of the complaints herein mentioned, will usually find the dose to suit them to be three or four pills once a day; sometimes, however, it is necessary to repeat this dose morning and night, according to the condition of the system at the time. No harm can be done by increasing the dose where it is found insufficient, as the Pills can never act injuriously. Others, who may be frequently subject to one or more of the specified ailments, should take smaller doses of the pills occasionally, one, two, or three generally being the ordinary dose, which may be increased at discretion by the patient.

The "complaints herein mentioned" include Constipation, Headache, Dizziness or Swimming in the Head, Wind, Pain, and Spasms at the Stomach, Pains in the Back, Restlessness, Insomnia, Indigestion, Want of Appetite, Fulness after Meals, Vomitings, Sickness of the Stomach, Bilious or Liver Complaints, Sick Headaches, Cold Chills, Flushings of Heat, Lowness of Spirits, and all Nervous Affections, Scurvy and Scorbutic Affections, Pimples and Blotches on the Skin, Bad Legs, Ulcers, Wounds, Maladies of Indiscretion, Kidney and Urinary Disorders, and Menstrual Derangements.

The pills had an average weight of 1¼ grains. Analysis showed them to consist of aloes, ginger, and soap; no other medicinal ingredient was found. The quantities were approximately as follows:

Aloes	0.5 grain
Powdered ginger	0.55 ,,
Powdered soap	0.18 ,,

In one pill.

Estimated cost of ingredients for 56 pills, one-eighth of a penny.

COLEMAN'S NERVLETTES.

Proprietors, J. Chapman and Co., Limited, Norwich.

Price 1s. 1½d. per bottle, containing 27 pills.

A circular enclosed in the package is headed:

Coleman's Nervlettes or Nerve Pills generate brain and nerve-force.

A further extract is as follows:

The busy brainy man has nothing to guide him as to his powers of endurance; he works at high pressure, regardless of consequences, until overwork and anxiety produce the inevitable—nervous exhaustion. A little rest and he recovers, rushes headlong again into hard work, increasing the pressure until suddenly one of the small blood vessels on the brain burst—what is commonly called a stroke—result, Paralysis. How often do we observe commercial and literary men of brilliant attainments gradually become impotent, through the fearful reckless waste incurred by overwork? If we use up more energy and force than we can naturally supply, we require something to assist nature. The man or woman who suffers from Brain Fag, Nervous Debility, Want of Stamina, Physical Weakness, Nervous Despondency, Sleeplessness, has in Coleman's Nervlettes a most powerful restorative and Nerve Tonic which will prevent wear and tear of nerves, will invigorate the brain, build, brace and buoy you up, enable you to safely tide over great tests of endurance, and if you should unhappily be half or almost completely worn out, quickly restore you so that you can naturally sleep well, eat well, think well, and work well.

Dose: Two Nervlettes daily after dinner.

The pills were coated with talc; after removal of the coating they had an average weight of about 1½ grains. Analysis showed them to contain free phosphorus, quinine sulphate, a little powdered liquorice, and about 20 per cent. of a powdered vegetable tissue, which could not be identified; the remainder of the pill appeared to be of the nature of excipient only. The amounts of phosphorus and

quinine were determined, and indicated the following formula:

Phosphorus	...	0.005 grain
Quinine sulphate	...	0.07 ,,
Vegetable powder	...	0.3 ,,

In one pill.

MOTHER SEIGEL'S CURATIVE SYRUP.

Proprietors, A. J. White, Ltd., New York and London.

Price 2s. 6d. per bottle, containing 3 fluid ounces.

Although this is described on the wrapper as "for dyspepsia" so many disorders are stated to be due to this cause, and amenable to treatment with this preparation, that it may fairly be included here. On the other side of the wrapper it is called "A cure for impurities of the blood," and "A cure for dyspepsia and liver complaints." In a circular enclosed with the bottle it is stated—

The symptoms mentioned above are the smoke of the fire of indigestion—a fire that will eat out your very vitals and sap your strength and vitality. For it can't be too often repeated that indigestion is the root of a great deal of evil; the origin of a great many disorders which no man quite understands how he came by. And why this is can easily be explained. Disease is poison; its symptoms are the manifestation of the poison. Indigestion creates many dangerous poisons, and is therefore the cause of many diseases.

So let us get rid of the smoke by putting out the fire, and purify our blood and system with Mother Seigel's Syrup, which will sweep away the poisons and make us healthy and strong.

Mother Seigel's Syrup is a highly concentrated, purely vegetable compound, having a specific action on the stomach, liver, and kidneys.

The directions on the label are:

Shake the bottle so as to mix the sediment. Commence by taking ten or fifteen drops three times a day, in a little water. If this does not give relief, the dose may be increased to thirty drops.

Analysis showed the presence of free hydrochloric acid, tincture of capsicum, a bitter substance agreeing in its properties with aloes, and sugar (partly as invert sugar); the colouring and flavouring substances also present indicated that the sugar had been added in the form of treacle. Quantitative determination of those ingredients capable of it, and estimation of the others by comparison with known mixtures, indicated the following formula:

Dilute hydrochloric acid *B.P.*...	10	parts by measure
Tincture of capsicum... ...	1.7	,, ,,
Aloes	2	parts
Treacle	60	,,
Water to	100	parts by measure

Estimated cost of ingredients for three fluid ounces, one-third of a penny.

MOTOR CARS FOR MEDICAL MEN.

(From a Correspondent.)

THE COST OF MOTORING.

IN the course of the past eighteen months we have published a considerable number of communications in which correspondents have given figures as to the cost incurred in using motors for the purposes of medical practice. We have recently received some further communications, and it may, therefore, be useful to analyse the data available to hand with a view of arriving at some sort of average. The material is the more useful in that all shades of opinion are represented, from those who are enthusiastic in praise of the services of their motors to those who are thoroughly dissatisfied, and to the data presented by these particular attention has been given in order to discern if possible the reason for their poor results.

The analysis of the figures and the comparison with the expense of keeping horses, where this is given, is not easy to make, as the various correspondents have included different sets of items, so that the figures have to be dissected out, in order to bring them into comparison; and it has seemed best for the present purpose to separate out what may be called running costs—namely, petrol, oil, tyres, and repairs—and to deal with them by themselves, leaving out of consideration for the moment the cost of a driver and cleaner, garage accommodation, insurance, and especially depreciation. With regard to the item of depreciation there is a good deal to be said, and the subject will be dealt with separately; but it may be at once stated that if the owner will take the trouble to master the mechanism of his car—and it will immensely add to the interest of using it if he does—there is no need to employ a chauffeur at high wages. It is quite true that a trained mechanic can do more in the way of minor repairs than an ordinary driver, but in the absence of a fully-equipped workshop he cannot by any means do all repairs, and now that repair shops with fairly competent repairers exist in abundance almost everywhere, it is far cheaper to send the car to them when necessary than to pay large wages every week. It is not difficult to teach any intelligent man how to do most of the current adjustments. The writer has two cars, and yet during the five years that he has had two, has never had a "chauffeur," but has taught his coachman to drive, and has also educated him into being a fair mechanic. There is, therefore, really no occasion to pay more than £52 to £64 a year for a driver who will keep the car. If the practitioner is so driven with work that he can never devote half an hour to his car, it may possibly be worth his while to pay more and get a more skilled mechanic, but then presumably his income will be proportionately larger, and the added expense will not matter much. Garage most people possess in the form of a coach house, and with the modern types of motors the great majority of adjustments can be made from above, so that a motor pit is rarely required.

Insurance.

The item of insurance may seem heavy; reasonable protection against all risks may be obtained for a small car for from £9 to £12 a year, but it may be remarked that this carries an insurance against certain risks which one has been in the habit of bearing uninsured with horse-drawn vehicles, such as damage to third persons, cyclists, pedestrians, etc. Still, in the present state of public feeling, when, if an accident occurs, the blame is almost always, whether rightly or wrongly, put upon the motorist, it is desirable to be fully insured.

This brings the total expense up to from £61 to £76 a year, the greater part of which would be incurred even with a single horse.

Depreciation.

Next comes the question of depreciation. There is an immediate and heavy drop in price the moment a car becomes "second-hand," and this drop is out of all proportion to any actual deterioration. Hence if we are to write down as depreciation the full extent of the drop in selling value it becomes a very serious item in the expenditure. Moreover, if a car is to be sold second-hand to the best advantage, it should be sold within a year and a half, and those rich motorists who are not satisfied unless they have the very latest of everything rarely keep their cars more than a year.

But, if the car is kept as a money earner, this frequent buying and selling is not to be thought of, for as a worker the car, if a good one, will not have depreciated in a couple of years, though its selling value would have dropped heavily. To give a concrete example, the writer has one car which cost £550 five years ago, and if sold now would very likely not fetch £120. But it has been completely overhauled, and in almost every particular is as good as new. It has cost in the five years £24 in repairs, many of these being replacements of parts when it was overhauled, parts which would have gone on for years to come, but which the owner as a counsel of perfection thought it better to replace when it was dismantled. Although cars have gone down a little in price, it could not be replaced by a similar new one for less than £450 or £500, and it would therefore be folly to sell it so long as the owner has use for it, as it has in all probability many years of useful life before it. What, then, should be set down as its depreciation? Evidently, so long as it remains a good servant, not the difference between its price when new and what it would now fetch. There are plenty of small cars still in excellent condition which have run their 15,000 miles, while the de Dion Company claim that some of their small cars have run 100,000 miles, and are still useful. Hence it would appear that the most economical way to use a car is to buy a good one, and then work it to the death—that is to say, until its bill for repairs becomes excessive.

Taking these points into consideration it will be seen that the amount to be set down as depreciation becomes a fancy estimate, about which no two people will agree, and so it is better to leave it out, always remembering that it does exist. If it is desired to give a liberal estimate, it

may be put probably at about 10 per cent. of the value of the car while retained and used by the owner. If the car is to be sold again it will be much more.

Actual Running Cost.

An analysis of the actual running costs furnished by our correspondents gives an average cost of nearly 3d. a mile, but this average is vitiated by including some which were as high as 7d. a mile, or even a little more; these will have to be referred to later, as such high costs are susceptible of explanation and are not to be regarded as fair averages.

That an estimate of 3d. a mile should be more than ample is curiously confirmed by a statement in the *Autocar* for December 19th, that a responsible motor agency has contracted with a medical man to garage, wash, adjust and repair, furnish petrol and tyres, completely overhaul once a year, and insure against fire, accident, third party risks and theft, for an inclusive charge of 3d. a mile indicated on the milometer, the car being a 6-h.p. de Dion. The average mileage has been 8,000, so that the owner will have to pay about £100, while, be it remembered, the agency has named a price at which no doubt it expects to make a profit. He, of course, provides his own driver, if he does not drive it himself.

Something under 3d. a mile—indeed, not more than 2d.—is what a small car should cost for what we have included in the running expenses, though few can hope to make it as low as 1d. a mile, the figure given by one correspondent, who uses solid tyres.

A closer examination of the higher figures given at once brings to light as the most salient fact that the repairs and replacements have been altogether excessive. Thus we read of big ends having to be adjusted after a too short mileage, of broken parts, damaged parts, renewals, and all sorts of repairs which in the aggregate ought not to have occurred if the car was a good one to begin with and was well treated.

By a really good car is meant one well designed, well constructed, of good material, of different materials appropriate to its several parts, and well tested before delivery, till—to borrow an expression from Rudyard Kipling—the machinery had "found itself." To the experienced motorist, the record of repeated repairs and replacements for certain cars which proved themselves very expensive plainly spells either an indifferent car or bad treatment. As confirmatory of this, in one case at all events the petrol consumption was about double what it should have been for the mileage. This tells us almost with certainty that for the largest part of the time the engine must have been running very badly.

Of course it is not meant to be implied that even on the best of cars, by bad luck, something may not go wrong early; thus, on the writer's car, which has such an excellent record as to repairs, one of the cones of the ball-bearing of a driving wheel wore badly, and had to be renewed within a few months; but the new one and all the others are still there and practically unworn. It is the occurrence of one thing after another that condemns either the car or its treatment, and the result cannot be taken as an average to be expected and accepted as in the day's work.

To summarize what has been arrived at by a study of the material before us, we may give the following estimate for an 8-h.p. car, two-seated, and of good make;

	£	s.
Running costs at 2d. per mile for 5,000 miles ...	41	14
Man and insurance	70	0
	111	14

This works out at about 5d. a mile run; as the man and insurance, which have been put not at the lowest but at the medium figure, are fixed charges, a larger mileage would work out at less cost per mile, and similarly with a smaller mileage the figures would be less favourable. These would be out-of-pocket expenses, and if to them we add £20 per annum depreciation on a £200 car we shall get a total cost of about 6d. a mile for 5,000 miles.

This estimate is intended to cover a series of years. In the first year repairs should be negligible, much less than in the estimate, and they should not rise to its level until several years have passed. Further, in forming the estimate in order that it should not be misleading, the allowance for expenses has been somewhat liberal.

In order to secure economy there are certain things to be observed. A really good car should be purchased, and that car should be kept contentedly for many years. It is essential not to purchase a car of higher horse power than the nature of the country and the work requires, for with increased horse power expenses of all sorts rise rapidly, and the carrying of extra weight, such as a four-seated body or extra passengers, is not to be done for nothing.

If the owner drives himself for the most part and gives a little attention to the car, he can probably secure the services of a suitable man for less than the £60 which is the amount in the estimate, and so reduce his mileage costs. It may be pointed out also that the man's wages alone (in the estimate) amount to nearly 3d. a mile, an amount equally incurred with horseflesh, so that really in instituting any comparison the question must be put whether the cost of horses and carriages can be as little as 2d. to 3d. per mile covered.

COST OF SMALL CAR.

DR. S. T. CROPPER (Chepstow), whose letter has been accidentally delayed, writes to speak well of his experience of an Adams car, 10-12 h.p. He finds it quite easy to manage in traffic and capable of taking the steepest hills in his neighbourhood. His car has run for 5,000 miles, and he finds that it does at least 30 miles to the gallon, and that the total cost per mile, including tyres and petrol, works out at between 2d. and 3d., varying according to the cost of a man to look after the machine.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the weeks ended October 24th and 31st and November 7th and 14th the deaths from plague in India numbered 2,046, 2,140, 1,993, and 1,943. The principal returns were: Bombay Presidency, 1,174, 1,143, 1,008, and 881; Bengal, 24, 52, 73, and 94; United Provinces, 12, 9, 17, and 22; Punjab, 110, 296, 304, and 322; Central Provinces, 263, 256, 178, and 142; Rajputana, 8, 25, 82, and 122; Hyderabad State, 171, 32, 44, and 26; Central India, 56, 75, 80, and 83; Mysore State, 173, 186, 171, and 164; Burma, 41, 27, 23, and 22.

MAURITIUS.

During the weeks ended November 12th, 19th, 26th and December 3rd and 10th the fresh cases of plague in Mauritius numbered 18, 18, 12, 4, and 7; the deaths from the disease amounted to 11, 13, 7, 1, and 5.

AUSTRIA.

At Trieste, 2 cases of plague reported on September 18th, 1 of which proved fatal.

TURKEY.

At Adalia, September 5th to 23rd, 2 cases of plague reported; at Bagdad, in September, 1 case, 1 death; at Beirat, 1 case on September 23rd.

EGYPT.

From September 4th to October 9th, 28 fresh cases of plague, and 15 deaths from the disease.

BRITISH EAST AFRICA.

At Kisumu cases of plague were reported late in August.

GERMAN EAST AFRICA.

At Muausa on August 19th one death from plague on board a steamer in the port.

CHINA.

At Tongshan, near Tientsin, in the first week of September a serious outbreak of plague occurred. At Wuchang an outbreak of the disease occurred during the first week of September.

JAPAN.

At Hiago-Ken, between August 15th and September 14th, 36 fresh cases of plague were reported with 22 deaths from the disease. In Japan from January 1st to September 14th the cases of plague were returned as 645 and the deaths from the disease as 574.

SOUTH AMERICA.

Venezuela.—From August 10th to September 6th 7 fresh cases of plague were reported from Caracas.

Brazil.—At Rio de Janeiro 6 cases of plague and 1 death from the disease were reported between June 22nd and August 23rd.

Chile.—In August several cases of plague reported from Iquique and Autopagasta.

Peru.—Between August 5th and 31st 109 cases of plague occurred with 40 deaths from the disease.

Ecuador.—Two cases and 2 deaths from plague were reported from Guayaquil between July 26th and August 29th.

TRINIDAD.

One fatal case of plague reported on September 30th.

THE BELGIAN ANTITUBERCULOSIS LEAGUE.

THE eighth annual report of the Ligue Nationale Belge Contre la Tuberculose contains reports from the provincial branches of the league, as well as the report of the secretary-general.

Antwerp.—The energies of the Antwerp branch were concentrated chiefly on a work of prophylaxis with regard to children, and the Villa Maritime at Wenduyne-sur-Mer was established to receive debilitated children born of tuberculous parents, rickety, strumous, lymphatic, and pretuberculous children, and those with closed tuberculosis. Some pay and others are treated gratuitously, but children from all over Belgium are treated, only provided they have a doctor's certificate recommending change of air; all, however, are charged for their keep. In 1907 the number of children treated was 235. Owing to the generosity of M. le Sénateur Van den Nest a new dispensary was opened, which, when completed, will have a special department for laryngology and radiology, a clinical laboratory for the examination of sputum, etc., with a complete equipment for the analysis of milk, douche baths, and a large lecture hall. During the year five conferences were held, and a committee of ladies collected money to equip the dispensary and the maritime hospital with linen. The ladies are now studying the question of the provision of a special open-air sanatorium for the women of Belgium, for whom up to the present little has been done. At the dispensary 3,493 attendances were made; 517 new cases were seen, and of these 72 men, 40 women, and 41 children were recognized as tuberculous. The home conditions of 133 of the 153 new cases of tuberculosis were inquired into. In the majority there was overcrowding, and in one-third the conditions under which they lived were found to be insanitary. Some interesting tables are given. Of the 153 cases, 128, in addition to 230 old cases, received assistance. The following were distributed:

Milk and kéfir	47,210 litres.
Bacon	1,260 kilog.
Peas	1,400 ,,
Rice	1,400 ,,
Emulsion of cod-liver oil ...	400 litres.

Also mixtures, dentifrices, toothbrushes, spittoons, and clothing.

In the laboratory 125 analyses of milk and 459 of urine were made, and 421 specimens of sputum were examined bacteriologically. At the Villa Maritime of Wenduyne-sur-Mer 235 children were treated during the year.

Malines.—The Dispensary Hector Leblus was visited in 1907 by 102 fresh patients, 70 of whom were suffering from diseases of the respiratory organs, and of these 23 were definite cases of tuberculosis. Practical assistance was given in the shape of: Milk, 1,882 litres; eggs, 7,224; bacon, 945 kilog.; smoked meat, 24 fillets; cod-liver oil, 8 bottles; rice, 6 kilog.; blankets, 7; beds, 7; lysol, 42 litres; spittoons, 35. Two patients in the Sanatorium of La Hulpe-Waterloo received a monthly sum of 20 francs, and an outfit of 2 flannel shirts, 2 vests, 2 pairs of drawers, 2 pairs of stockings, 1 pair of goloshes. The committee has drawn up a plan for the control of farms in order to ensure clean milk. The dispensary has done excellent work in seeing patients and educating them hygienically, and by supplying them with beds in order to isolate them in houses where they shared beds with others.

Brabant.—At the Dispensaire Albert-Elizabeth et Leopold 1,018 patients suffering from tuberculosis were seen. The following help was given: 66,782 litres of milk; 4,065 kilograms of bacon; 2,457 litres of cod liver oil and emulsion; 37,960 kilograms of coal, and 2,697 fr. 50 c. in kind. Entertainments, conferences and lectures with lantern slides were given.

East Flanders.—The figures for disinfection carried on at Gand are illuminating as showing the progress of hygienic ideas:

1897	41	disinfections for tuberculosis.
1898	75	,, ,,
1899	82	,, ,,
1900	60	,, ,,
1901	154	,, ,,
1902	208	,, ,,
1903	276	,, ,,
1904	302	,, ,,
1905	292	,, ,,
1906	277	,, ,,
1907	310	,, ,,

The Gand dispensary only diagnoses cases, warns patients of the danger to themselves and to their surroundings and the means of avoiding them, but does not treat. The patients attend periodically, and the necessitous are recommended to philanthropic societies for assistance and are given milk by the dispensary. Of the 300 new cases examined in 1907 66 were tuberculous. A disinfecting-room for the linen of tuberculous patients is about to be added to the dispensary, as towns where these exist show striking figures.

Hainaut.—During 1907 over 300 tuberculous subjects have been seen 5,000 times by the two doctors in charge of the dispensary. Seventy-five have been taken in at the Galerie de cure d'air au Bois-d'Havré, and of these 45 per cent. came out cured and able to work as hard as usual.

Limbourg.—Here was held an exhibition of placards, instructive pictures, and leaflets. Here indifference is found among the public and the doctors; nevertheless the propaganda continues and does good, particularly among school teachers, thanks to the zeal of the inspectors. Only three doctors sent patients to the dispensary, where they receive not medical treatment but tickets for milk, eggs, pocket spittoons, leaflets, and the examination of sputa—all gratis. Here the State assists the Bureau de Bienfaisance and the town gives land.

Luxembourg.—Here are held conferences (announced in the newspapers) and lectures, and there is a system of disinfection. The Minister of Agriculture undertakes to train in theory and practice the superintendents and staff in charge of disinfecting centres and to pay half the cost for the equipment of these, while the Conseil Provincial votes 500 francs per annum. They propose next to educate the masses in prophylaxis.

Namur.—Lectures are given, leaflets distributed, and, through the exertions of the local section, the subject was discussed in sixty-five local newspapers. The dispensaries of Namur, Dinant, and Zamines continue to receive and instruct a large number of patients and to disinfect their houses and otherwise assist them.

Liége.—At Liége the number of tuberculous patients under the prophylactic supervision of the Dispensaire Hortense Montefiore on January 1st, 1907, was 1,143. All degrees of the disease are seen, but it is noteworthy that those in the early stages are far in excess of the more advanced. Of the 286 new cases there were:

213 in first stage, or 74.5 per cent.
44 in second stage, or 15.4 per cent.
20 in third stage, or 7.0 per cent.
9 pretuberculous, or 3.1 per cent.

Of these, 147 were sent by their own doctors, 30 by the patrons of the Oeuvre Liégeoise des Tuberculeux, 34 by other patients, 27 by polyclinics and hospitals, 8 by mutual help societies, and 12 by charitable societies, while 28 attended on their own initiative. Of these patients, 214 were men, 66 women, and 6 children. These 286 cases belonged to households containing a total of 1,080 persons, of whom 347 were children. Of these, there slept in the same room:

85	with 1	other	person
57	,, 2	other	persons
41	,, 3	,,	,,
16	,, 4	,,	,,
8	,, 5	,,	,,
6	,, 6	,,	,,

154 slept in the same bed with others.

Of these 286 cases, 117 were sent to the sanatorium of Borgoumont, the expenses being borne by:

Mutual aid societies...	44 patients
Civil hospitals of Liége	33 ,,
Municipal administration... ...	26 ,,
The patients themselves	9 ,,
The employers of sick workmen ...	5 ,,

After the patients leave the sanatorium they are watched by the dispensary. The experience of eight years proves that the sanatorium and dispensary are complementary, and work harmoniously; 190 old patients from Borgoumont have been under observation. Of these, 177 were in the first stage, 39 in the second, and 4 in the third. Three years after their discharge 65.2 per cent., or two-thirds, appeared to be cured and at work as usual. In 11 per cent. the tuberculosis continues its evolution; the others are dead. In 1908 30,119 litres of milk and 24,297 eggs were distributed, and there were 98

disinfections in 1907. An endeavour is made to isolate infectious cases in the homes; they remain under the supervision of the dispensary, but are treated by their own doctor, the municipality paying; 49 cases were thus isolated in 1907. They were supplied with bed and bedding and the necessary accessories, and the rent of the extra rooms was paid by the Oeuvre. There will shortly be opened, owing in great measure to the liberality of M. Georges Montefiore, a sanatorium for women in the Province of Liége—the first in Belgium.

Verviers.—In 1907, of 173 dispensary cases, 60 had tuberculosis; 15 of these died during the year; 28 were sent to Borgoumont; pocket spittoons were given to all patients belonging to mutual assistance societies, and they also received milk, eggs, and assistance in paying their rent and the disinfection of their houses.

Huy.—In 1907, of 26 new patients, 11 men were sent to Borgoumont and 1 girl to the sanatorium Sante-Marie at Bormenville; disinfection was carried out, and pocket spittoons, bedding, travelling expenses, rent, clothing, etc., supplied by the dispensary; 76,248 litres of milk, 12,000 eggs, and 1,461 kilos of meat were distributed.

Waremme.—The antituberculosis dispensary of Waremme was established in 1907 by the University Extension of Waremme. The committee, after opening a dispensary, circulated 10,000 leaflets and caused them to be read out in elementary and secondary schools. In 1908, 52 patients were in attendance, showing the importance of the work.

LITERARY NOTES.

In a note on the art of healing among the Druids, which appeared in the British Medical Journal of December 26th, 1908, it was stated that among the plants used for their supposed magical attributes was ivy. This should of course have been the mistletoe, which, as every schoolboy knows and many schoolgirls learn about this season, was looked upon as having a peculiarly sacred character by the Druids.

Minerva Medica is the title of a new medical review, the first number of which has just appeared in Rome. We are gratified to learn that several of the abstracts, not only of original articles but of some of the lighter notes, are taken from the British Medical Journal.

Pathologia is the title of a new fortnightly journal published at Genoa, under the direction of Professors Golgi of Pavia, A. Lustig of Florence, A. Bonome of Padua, B. Morpurgo of Turin, G. Tizzoni of Bologna, and a number of other well-known Italian pathologists. The editor is Professor M. Segale. As its name imports, the new periodical is devoted to pathology, and the names of those under whose auspices it appears are sufficient guarantees of the scientific value of its contents.

The *Edinburgh Medical Journal* for November publishes the introductory address of Professor F. M. Caird on his taking possession of the chair of clinical surgery as Regius Professor in the University of Edinburgh. It is entitled Some Points in the Evolution of Surgery, and is in fact a very interesting sketch of the history of medicine in Scotland. The Edinburgh School of Medicine dates from 1505, when that "Rycht Potent Prince" King James IV granted a Charter of Incorporation to the Civic Guild of Chirurgeons and Barbers, which was the precursor of the Royal College of Surgeons. For a long time, however, there were no men of mark in medicine in Scotland such as the Linacres, the Wisemans, and the Sydenhams who flourished south of the Tweed. "Surgery was rude in a rude age; medical skill and treatment generally beneath contempt." Professor Caird quotes Dunbar's lines on a friar, who was a peripatetic practitioner:

> In Scotland than, the nearest way,
> He came, his cunning till essay,
> To some men there it was no play,
> The proving of his science.

He had some notions of anatomy, for we are told "Vein organs he full cleanly carvit." He dispensed his own drugs, and made experiments therewith on the bodies of his patients, for it is said that "In pottingary he wrocht great pyne; he murderit into medicine." His handy-work as a surgeon is described as follows:

> His irons were rude as ony rauchter,
> Where he let bluid it was no lauchter,
> Full many instruments for slaughter
> Were in his gardyvians.

He bled his patients figuratively as well as physically:

> In leechcraft he was homicide
> He would have, for a nicht to bide,
> Ane hackney and the hurt man's hide,
> So meckle was he of myans.

After the Reformation Scots flocked to Holland for medical education which could not be had at home. So scanty was the supply of bodies for dissection in Edinburgh that the "resurrection" of corpses caused riots as far back as 1711. The College of Physicians was founded in 1681, but there was no really systematic teaching till 1726, when the City Fathers appointed four professors of medicine, among them the celebrated anatomist, *Monro primus*. Next came into being the infirmary, which was founded in 1736. In addition to medical and surgical wards, with a spacious and well-lit operating theatre, a ward was set aside for lying-in women. There were twelve cells for the insane, and there were beds for unfortunates and a separate ward for married women "sufferers not by any fault of their own. This latter done by petition of the physicians to keep them from the odium of the common Lock." In 1828 the infirmary was enlarged, and in 1879 the famous building, in which such men as Benjamin Bell, Liston, Syme, Simpson, and Lister had done their work, gave place to the new palatial infirmary Professor Caird gives extracts from old case-books illustrating the practice of John Bell, "the first and, perhaps, the greatest teacher of clinical surgery Edinburgh ever produced." Coming down to a later day, Professor Caird says that in 1853 so great was the mortality from blood poisoning that certain of the most unhealthy hospital wards had to be cleared out and the patients treated in tents on the green. He goes on:

> When Mr. Lister began work in Glasgow, hospital gangrene was rampant. It is now unknown. In 1873 that most charming and able of surgeons, Nussbaum of Munich, was afraid to operate, since every wound became infected, and the mortality rose to 80 per cent. Mr. Spence, in his lectures, 1871, "suspects pyaemia is not so infrequent in private practice as is often stated." And now so great is the change that even to the seniors among us the old typical pyaemia, with its hay-scented breath, is little more than a memory. This astounding improvement, it must ever be remembered, took place in the selfsame wards where disaster and calamity formerly prevailed. It is to Lister we owe this transformation and incalculable boon. He established definite principles. We can look back on the unrest which characterized his methods, on the manner in which each change led to another advance, in his endeavour to treat the surroundings of the wound rather than the wound itself. We admire the beauty and ingenuity with which he defended his wounds from microbes, and yet screened the defensive power of the tissues of the body, on which he so sagely relied, from the agents he employed in combating the microbes. The principles laid down by Lister remain unchanged. The endless striving after perfection which characterized all his methods will never cease.

We commend this passage to the special attention of those who are striving to make believe that Listerism died with the spray which was a passing phase in the evolution of the doctrine. Another passage in Professor Caird's address is worthy of note. He says:

> Huxley, whom we were fortunate enough as students to hail as interim teacher when Wyville Thompson was away on the *Challenger* Expedition—Huxley felt himself compelled to renew his student days and to join the zealous throng which daily followed Lister. He summed up his impressions as he said, "What amazes me, Mr. Lister, is the painlessness of your wounds. You have not only banished those awful scourges which used to affect our wards, but you have abolished the pain and suffering associated with wounds and surgery."

We submit this testimony of Huxley to the consideration of those antivivisectionists who argue from their own preconceived notions that a wound must be painful.

A society of medical jurists and prison medical officers has been formed in Hungary. The President is Dr. Ajtai, Professor of Forensic Medicine.

In connexion with the public library of Grand Rapids, Michigan, a course of eight lectures has been arranged to be given by representatives of the various municipal boards and departments, showing the work they do and the money they receive and spend for the city. Education, public health, public works, and the work of the mayor and common council are among the subjects to be dealt with, and the example is one which might well be followed in other municipalities.

SEVENTY-SEVENTH ANNUAL MEETING

OF THE

British Medical Association,

AT BELFAST, JULY, 1909.

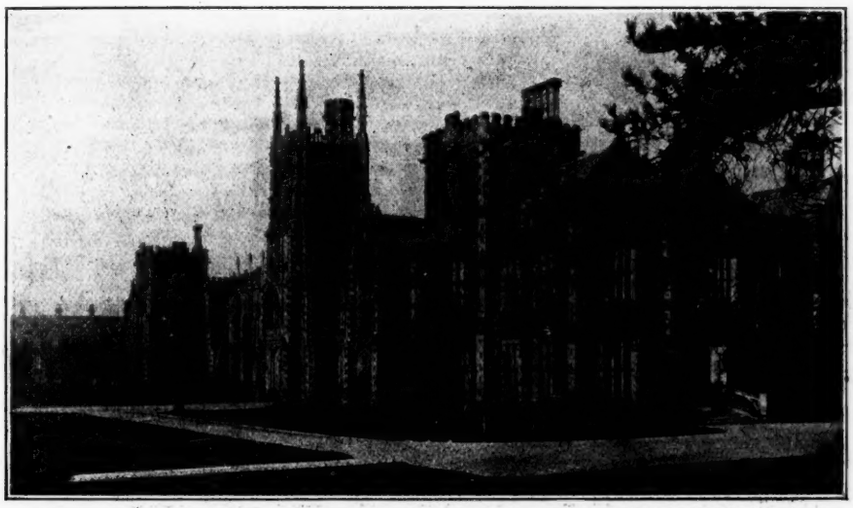
BELFAST—THE COLLEGE AND HOSPITALS.

QUEEN'S COLLEGE.

QUEEN'S COLLEGE, Belfast, in which the Association will hold its meeting next July, has had a remarkable career. Not yet sixty years old it has been affiliated with two universities, has seen both abolished by Act of Parliament, and before these words are in print it will itself have ceased to exist as "Queen's College," and will have blossomed into an autonomous university.

History.

The college was founded by Act of Parliament in 1845, on the initiative of Sir Robert Peel. It, and the Queen's Colleges of Cork and Galway, were affiliated to the Queen's University, established in 1850.



Queen's College, Belfast, where the Association meetings will be held.

The college having been founded on parchment, a site for it was chosen on the Malone Road, at the south side of the town, and the plans were entrusted to Sir Charles Lanyon, who succeeded in producing a building which has been a constant pleasure to the eye for sixty years. It would be hard to point out a better example of the successful use of red brick for a large building. Belfast brick has none of the anaemic appearance that characterizes so much English brick, but is a good strong red, toning with time to a very rich colour, which when lit up by the afternoon sun, is really beautiful.

The college opened its doors to students in 1849, and among its first professors were several distinguished men. Thomas Andrews, the professor of chemistry, will always be remembered for his researches in the liquefaction of gases and his study of their critical temperatures. Alexander Gordon, the professor of surgery, was the inventor of the well-known splint for Colles's fracture, and an authority on fractures of the head of the femur. For nearly forty years he inspired generations of students with something of his own wonderful enthusiasm in the use of the senses, and specially the sense of touch, in the diagnosis of surgical ailments. Portraits of both these teachers are to be seen in the Great Hall of the college.

Ever since its doors opened the college has grown and prospered, but in its university relations matters have not always gone smoothly. The Queen's University examined and granted degrees to the students of the three Queen's Colleges, and to them alone, and the examiners were the teachers in the colleges. But for various reasons these colleges were not acceptable to the Roman Catholic majority in the country, and so in 1879 Parliament abolished the Queen's University and set up the Royal University of Ireland, an examining body like London University, which drew its candidates and examiners from all sources, though mainly from the three Queen's Colleges and the Roman Catholic College in Dublin. But time has proved that such a university is not suited to the tastes of the country, and when the Irish Universities Act of 1908 was passed, the ending of the "Royal" did not evoke any deep grief in the country.

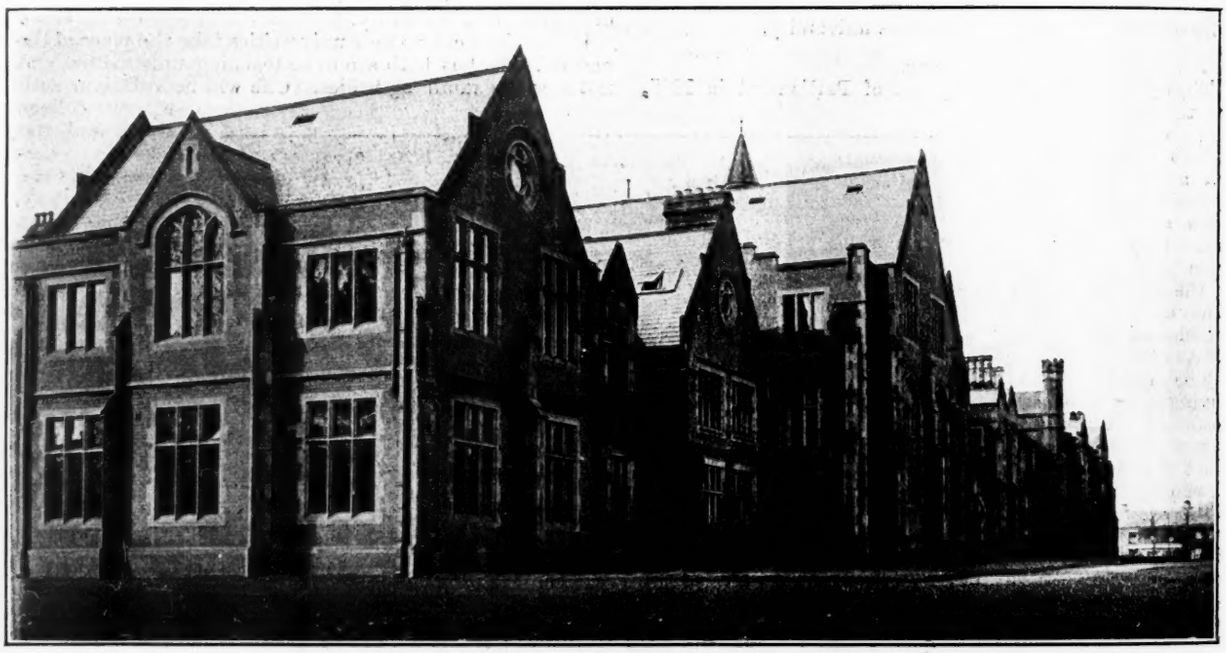
Under the Act two new universities take the place of the one old one, but both are to be teaching universities, and not merely examining bodies. One will be in Dublin, with a new college there, and the Queen's Colleges of Cork and Galway, now called University Colleges, affiliated with it, and the other in Belfast. At the present time a Commission is sitting, appointed by Parliament to draw up the statutes of the new Belfast University, and till these are published it is not possible to give particulars of the courses of study. But from the public utterances of various members of the Commission, and those who are bound to have influence with them, it is clear that the intention is to establish a real centre of learning and culture, and not merely a science and technical school. The Arts side is sure of a considerable number of students, as it will no longer be possible to take an Arts degree without attending classes, as was the case in the Royal University. The candidates for the ministry of the Presbyterian Church in Ireland pass through an Arts course before proceeding to their theological studies at the Presbyterian College, which is just beside Queen's.

As already said, apart from its university difficulties, Queen's College has always prospered, and never more so than during the twenty-five years that have elapsed since the British Medical Association last met in it. The present head of the college (now Vice-Chancellor of the Queen's University of Belfast), the Rev. Thomas Hamilton, D.D., was appointed President in 1889, and under him a forward movement was soon started. One of the first steps was the throwing open of all classes, medical as well as arts, to women, and experience has fully justified the step. There are this session 87 women students; all prizes and scholarships are open to them, and, indeed, are frequently gained by them.

Recent Extensions.

In 1894 new chemical laboratories were opened, followed

in 1897 by the Students' Union and new physiological and pathological laboratories. In 1901 the President initiated the Better Equipment Fund, which resulted in raising of the sum of £70,000, of which Sir Donald Currie, a Belfast man, generously contributed £20,000. Old students of the college and Ulstermen in all parts of the world sent subscriptions, and the movement was of immense benefit to the college, not only materially, but also from the interest it raised. Before the days of the fund the majority of the inhabitants of Belfast and the neighbourhood looked on the college as a Government institution, with whose support or improvement they had no more to do than they would have in the case of police barracks or post office. Another indirect benefit of the fund was the claim which it established on the Treasury, ready, like Providence, to help those who help themselves. The net result is that in the last three or four years large new laboratories have been thrown open to the students of chemistry, engineering, natural history, physiology, pathology, and pharmacology, while improvements in the existing accommodation have been made in all directions, and are still going on. The teaching staff also has been greatly increased. Since 1890 lecturers have been appointed in ophthalmology, sanitary science, and vaccination, and demonstrators, assistants, or readers in practically every subject.



Queen's College, Belfast: New Science Laboratories, from north-east.

As a result of the opening of the new laboratories, there has developed a vigorous school of research workers in different departments, but specially in the pathological. There a number of young medical men have been engaged for several years past in research work, which has at times been aided by British Medical Association grants and scholarships. The epidemics of typhoid and cerebro-spinal fever from which Belfast has suffered have been carefully studied, especially as regards the effect of the micro-organisms of these fevers on the blood, and it is on the suggestion of these workers that the new Section of Haematology and Vaccine Therapy is to be inaugurated at the Belfast meeting,

In the current session there are about 400 students attending college classes, of whom just about half are medical. There are, of course, many more medical students attending the various hospitals, and not at classes in the college at present.

The Buildings.

On entering the main door of the college the Great Hall is found immediately on the right, and here during the Association meeting will be the general reception-room, post office, etc., with plenty of room and seats for those wishing to look over their letters or chat with friends. This hall has a fine lofty roof and mullioned windows, and its walls are hung with portraits, most of them of past teachers. Here may be seen Dr. Andrews, with his simple gas-compressing plant; Dr. Gordon, with a fractured femur in his hand; Dr. James Cuming, the President of the Association when it met here in 1884; Sir William MacCormac, an old teacher at the Royal Hospital, though not at the college; and Dr. Redfern, who is happily still with us, though retired from active work. He was Professor of Anatomy and Physiology from 1860 to 1893, and during all those years his strong personality dominated the medical school. Whatever else "Queensmen" of those days knew or did not know, they were thoroughly grounded in anatomy, and many a grey-haired man shivers yet as he thinks of the heckling he got from "Peter" when he was found consulting the pages of Gray or Ellis on the insertion of a muscle, instead of dissecting it out!

A side door opens from the hall on to the cloisters, from which the science and medical buildings are easily reached. The Latin class-room, at the end of the cloisters, will be temporarily raised to the dignity of a smoking-room. The junior biological laboratory, reached by a stair from the entrance hall, will be fitted up as a writing-room, and on the same stair will be found the local secretaries' and other offices. In the various lecture-rooms and laboratories there will be accommodation for all the sections.

The library is a detached building on the north side of the college, close to the University Square gate. It contains a collection of about 80,000 volumes, which is being rapidly increased now that more prosperous days have dawned, and the building itself will shortly be enlarged by the addition of two new bays. In the library the meetings of Council will be held, and the addresses in medicine, surgery, and obstetrics delivered.

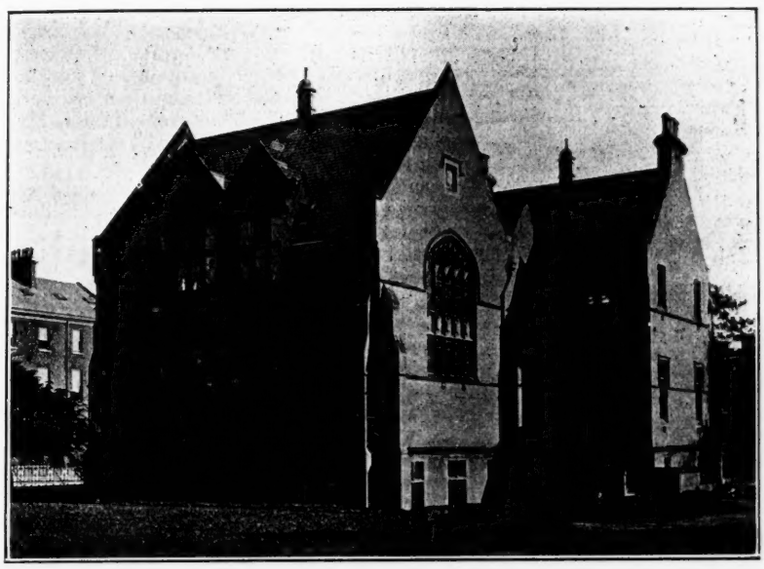
The Students' Union is another detached building at the north-east corner of the grounds, and in it will be the refreshment department, where luncheons and teas will be provided.

In the main block of medical buildings three of the sections will meet, and there the pathological museum will be housed, the medical museum and dissecting room affording ample space for it. In the medical museum will be found the unique collection of fractures which the college owes to the energy and enthusiasm of the late Professor Gordon. The collection is probably without a rival in the world, and will be one of the main points of interest to members of the Surgical Section.

The trades museum will be found in the exhibition hall of the Botanic Gardens at the south-east corner of the college grounds close to the medical buildings.

The Medical School.

From the opening of the college till within the last few years the general clinical teaching of medical students was confined to the General Hospital, afterwards the Royal, and now the Royal Victoria Hospital. But recently the Union Infirmary and the Mater Infirmorum Hospital have been thrown open to students, and certificates from them are accepted by the university authorities. Besides the general clinical instruction, special instruction is given in the two children's hospitals and in the various special hospitals mentioned below.



Queen's College, Belfast: Students' Union.

THE ROYAL VICTORIA HOSPITAL.

Apart from the Union Infirmary, the Royal Victoria Hospital is much the largest hospital in Belfast, containing, as it does, 300 beds.

It originated as a dispensary in 1792, which developed into a fever hospital in 1797 and a general hospital in 1799. In 1817 the old General Hospital in Frederick Street was built, and gradually increased by the addition of new wings to 180 beds. In 1875 it became by Royal Charter the Royal Hospital. As the city grew the accommodation at the hospital became far too small, as well as out of date, and it was resolved to build a new hospital. This resolve in due time took shape, and the new hospital was opened by the King in 1903, being called the Royal Victoria Hospital in commemoration of the Diamond Jubilee.

The hospital is built on a site granted by the corporation, consisting of six acres of the old asylum grounds in Grosvenor Street. The position is not a central one, and it was only after much discussion that it was decided upon, but it was finally concluded that the healthy site on open and elevated ground was sufficient compensation for the long distance from the docks and shipbuilding yards.

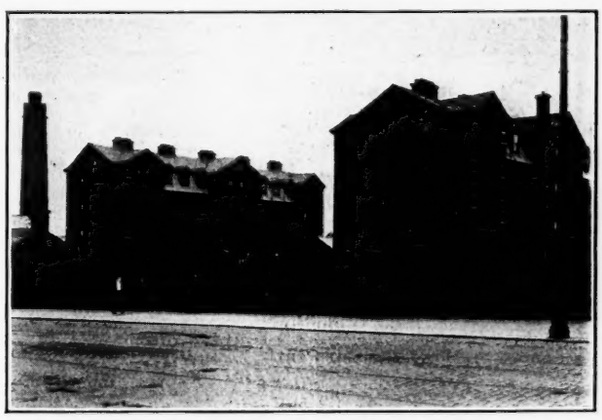
The plans were drawn by Messrs. Henman and Cooper of Birmingham, and are of a strikingly original character. The two guiding principles were that all patients should be on one floor, and that the whole building should be heated and ventilated by the plenum system. Consequently all the wards are on the same level, a series of seventeen running out side by side from the main corridor, the lighting being, with the exception of the two end wards, by lantern lights in the roof, and one large French casement in each ward, at the south end, looking out on the garden and tennis grounds. The wards are on the unit system, arranged in pairs for male and female patients, each unit having 32 beds, and its own ward kitchen, clinical room, or theatre, etc. Each physician or surgeon has his own unit, and his work is thus almost as much separated from that of his colleagues as if he were in a separate hospital.

The only wards not included in the foregoing are the ophthalmic wards, which are in a small block to the north of the main corridor, and the septic and infectious wards, in two small isolated blocks at the west end. The administrative buildings are on the north side of the main corridor, consisting of a low central hall flanked by two large four-story buildings, as seen in the illustration. The out-patient department is also on the north side, between the administrative block and the ophthalmic wards. There is a large central waiting hall, with eighteen rooms round it for the use of the various departments of work, and in the basement below is ample accommodation for students.

The pathological block is also on the north side of the main corridor, with a separate entrance, and every accommodation for work. On the west side of the hospital, and entirely detached from it, is a house for the medical superintendent.

The air for ventilation is taken in through a large shaft which rises on the east side of the hospital, and, bifurcating, leads down to two fans, each over 10 ft. in diameter and capable of driving 10,000,000 cubic feet of air per hour. One fan only is needed at a time, the other being in reserve for emergencies. As the air goes to the fans it is washed by passing through wet curtains, and warmed by steam pipes if necessary, and after passing the fans it is carried through a large tunnel under the main corridor, with branches to all parts of the hospital. Provision is made for altering the temperature in any ward by steam pipes at the intake of air for each ward.

After five years' experience the general results of the working of the plenum system are favourable, and neither medical staff nor board of management regret what was looked on by many as an experiment.



Royal Victoria Hospital: North front showing administration blocks.

THE THRONE CONVALESCENT HOME AND HOSPITAL

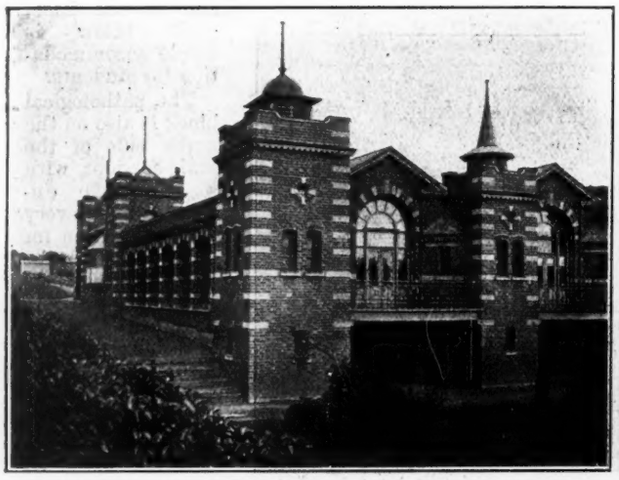
is situated on the slopes of the hills to the north of Belfast Lough, about 4 miles from the city. It is under the same board as the Royal Victoria Hospital, but has separate funds. It is a composite institution, and includes a hospital for children — chiefly chronic hip and spine cases—with 33 beds, a consumption sanatorium with 10 beds, and the convalescent home for patients from the Royal Victoria with 22 beds.

THE MATER INFIRMORUM HOSPITAL.

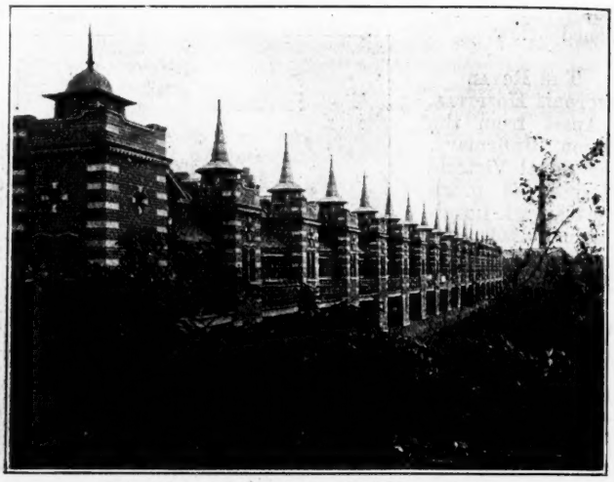
This hospital, situated on the Crumlin Road, on a good elevated site, was founded in 1883, when a house on the present site was bought by the late Dr. Dorrian, Roman Catholic Bishop of Down. In a few years the house was demolished and a handsome new hospital, erected from plans by Mr. W. J. Fennell, M.R.I.A.I., was completed in 1904.

The hospital is built on the pavilion system, and is

planned for 165 beds. The east pavilion has six large female wards on three floors. The west pavilion accommodates the extern department on the ground floor and four large male wards on the first and second floors, while the central pavilion is administrative, and between the pavilions are several smaller wards for children and special cases. At the back of the administrative pavilion is a handsome chapel, and behind it are two large and well-lighted operation theatres. The total cost was about £50,000. The nursing is under the supervision of the Sisters of Mercy, but persons of all creeds are freely admitted as patients. Ground has lately been acquired on the east side of the hospital, and a new block is to be erected for the extern department, which has quite outgrown its present quarters. During the present session clinical teaching has been begun, and arrangements have been made for resident pupils.



Royal Victoria Hospital, Belfast: South-west corner, showing wards, sanitary towers, and large single windows.



Royal Victoria Hospital, Belfast: South front.

St. Colman's Sanatorium, near Carrickfergus, is worked in connexion with the hospital for convalescent patients.

Hospital for Sick Children.

This charity was founded in 1873, and the present hospital in Queen Street was built in 1879. On the ground floor are the board room, dispensary, etc., and on the first and second floors the surgical and medical wards, with 20 beds in each.

Good use has been made of the rather cramped city quarters, and as the hospital is on the edge of the poorest and most crowded district of the city it has ample scope for work. Much larger quarters could easily be occupied if available.

Royal Victoria Hospital, Belfast: A surgical ward showing roof light and single south window.

Ulster Hospital for Children and Women.

This hospital, originally near the other children's hospital, was moved to Templemore Avenue, Mountpottinger, on the County Down side of the river, some eighteen years ago. As it is the only hospital in that enormous working-class district it is always full to overflowing. There are at present 8 beds for women and 20 for children, but a movement for rebuilding the hospital is in progress, and, no doubt, when that materializes the accommodation will be greatly increased. More than half of the necessary sum, £10,000, has been promised, but it has been arranged that no building shall be started till every penny is contributed. The present premises are simply an old house, once a suburban villa, converted to hospital use, but there is ample room in the grounds round it for rebuilding and extending it. There is an extern maternity department, and by mutual agreement the County Down side of the city is left to this hospital, while the needs of the County Antrim side are looked after by the next named.

The Maternity Hospital.

This is one of our oldest charities, having been founded in 1794. The present fine hospital in Townsend Street was opened in 1905 and gives accommodation to 24 women. The general arrangements for work are excellent, and the hospital is well worthy of a visit from all who are interested in obstetrical work. About 500 to 600 women are delivered annually in the hospital, and a larger number attended in their own homes.

Ophthalmic Hospitals.

There are two special hospitals for the treatment of eye, ear, and throat cases—the Belfast Ophthalmic Hospital, in Great Victoria Street, founded in 1867, and the Ulster Eye, Ear, and Throat Hospital in Clifton Street, founded in 1874. Both have crowded externs on most mornings of the week, and wards generally full, so that there seems to be ample work for both, as well as for the special departments of the general and children's hospitals.

The Skin Hospital

will be found in Glenravel Street, off Clifton Street, close by the last mentioned ophthalmic hospital, having been founded by the same generous family—the Benns. In accordance with the original plan of the founders, accommodation is provided for a number of private patients in both hospitals. The extern department of the Skin Hospital has lately been remodelled and equipped with all modern apparatus.

The Samaritan Hospital.

This hospital, situated on the Lisburn Road, not far from the college, was, like the two last-named, built by the Benn family. It was opened in 1874, and in 1897 two cancer wards were added through the generosity of the late Mr. Forster Green. There are 25 beds, and about 1,000 out-patients are seen annually.

Forster Green Hospital for Consumption.

In 1878 several medical men in Belfast started a special

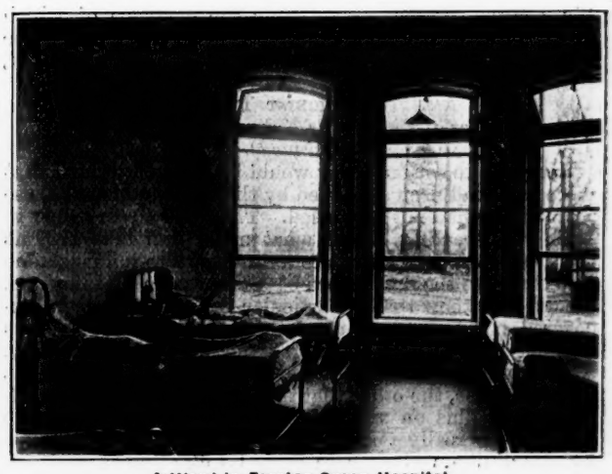
dispensary for diseases of the chest. This developed into a small hospital with 6 beds in 1890. It was in an old city house, most unsuitable for the purpose, but it served to show the necessity for such an institution, and when efforts were being made to improve matters, the late Mr. Forster Green came to the rescue, and bought a beautiful house and forty-five acres of ground at Fortbreda, about ten minutes' walk from the end of the Ormeau Road tramline. After extensive alterations this was opened with 40 beds, and every arrangement for open-air treatment. The Belfast Corporation has lately arranged to endow 30 additional beds for a period of ten years at least, and new wards containing these beds were opened in 1908. All arrangements are on the most approved modern principles. The grounds, which are well wooded, with beautiful views of the Antrim Hills, give ample space for exercise to those patients who are allowed it. There is a resident physician, and a small but very practical little laboratory is provided, where he or the visiting staff can examine sputa, etc. In connexion with the hospital is a city dispensary open on three days a week, and a nurse who visits patients in their own homes and acts as a fresh air missionary.

Mater Infirmorum Hospital, Belfast.

The Abbey Sanatorium.

Some two or three years ago the Belfast Board of Guardians found the consumptive wards in the Union Infirmary so crowded that they decided to open a special hospital and sanatorium to relieve them. A fine old country house with good grounds was then on the market—the Abbey, at Whiteabbey, on the north shore of the Lough, about five miles from the city. This was purchased, and the house was fitted up as the administrative block and hospital for more advanced cases, while accommodation was provided in pavilions in the grounds for cases which were suitable for sanatorium treatment. In all 265 cases are at present under treatment, the full number for which there is room, and the results have been such as to thoroughly justify the guardians' enterprise. The provision of two new pavilions is under consideration, as numbers of applications for beds in the sanatorium have to be refused. All the arrangements are excellent, and the institution well merits a visit. Though much remains to be done to combat the scourge of tuberculosis, it must be admitted that, compared with other cities of its size, Belfast has some reason to be pleased with the fact that it has in the Forster Green, Abbey, and Throne Sanatoriums about 350 beds devoted to the treatment of this disease on modern lines.

Forster Green Hospital for Consumption.



A Ward in Forster Green Hospital.

The Fever Hospital.

The Fever Hospital, with 168 beds in six pavilions, and the District Lunatic Asylum are at Purdysburn, about six miles from the city, and two from the tram terminus. The villa system has been adopted with great success at the asylum, and both institutions should be visited by those interested in the lines of work carried on in them.

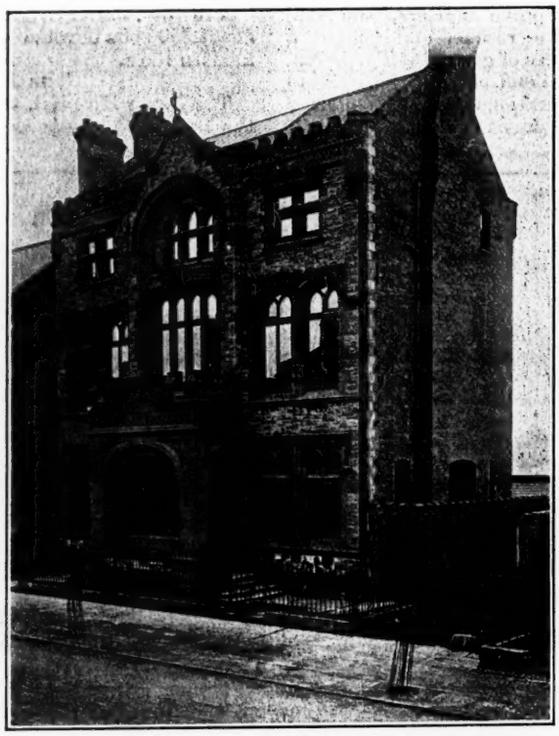
The Medical Institute.

The Ulster Medical Society, which began its existence by the amalgamation of two older medical societies in 1862, and which includes in its membership most of the medical men of Belfast and the neighbourhood, is proud and happy in the possession of a home of its own. For years the society had met in the Royal Hospital, the Natural History Museum, and various other places, and every now and then there was a talk of starting some scheme for providing it with a permanent meeting-place with proper room for its library, but the financial and other difficulties seemed insuperable. The difficulties, however, were overcome as completely as unexpectedly. At the annual dinner of the society in 1901 the President, Sir William Whitla, offered to build and furnish the desired home, provided the society paid the ground rent and undertook the upkeep of the premises. The scheme was unfolded in detail, accepted enthusiastically by the society, and a central site was secured in College Square North. The foundation-stone was laid in April, 1902, by Professor Redfern, and the building opened by the Lord Lieutenant of Ireland in November of the same year.

The building has a frontage of 50 ft., and is three stories high, of rough-hewn white stone, with doors and windows relieved by red sandstone worked in Gothic moulding. Over the top gable stands the serpent coiled round the rod of Esculapius.

On the ground floor are two large rooms separated by

glass doors; the smaller is the entrance hall and smoking-room, and the larger the library. When desired, the doors can be removed and the two rooms thrown into one. Over the fireplace in the entrance hall is a marble bust of Sir William Whitla, subscribed for by the members of the Society. Over the library fireplace is one of the features of the institute—a large window, whose sill forms part of the stonework of the chimney-piece. It contains a beautiful stained-glass memorial to the late Dr. William Smyth, of Burton Port, co. Donegal, and was unveiled by Her Excellency the Countess of Dudley on the afternoon of the day on which the Lord Lieutenant opened the institute. In a very touching speech she paid her tribute of admiration to the man who, when all others refused to help, carried food and medicine to the people of the typhus-stricken island of Arranmore, off the coast of Donegal, and who finally lost his life from the same fever, contracted by carrying some of the patients, with the help of Dr. Brendan MacCarthy, to an old boat, and rowing them to the mainland. Lady Dudley well described him as an everyday hero, wholly unconscious of having performed any unusual act of heroism. The panels of the window show two scenes of the story—one of Dr. Smyth kneeling by the bedside of an Arran fisherman, and the other of him and Dr. MacCarthy with a sick girl and her father in the boat. Across the base of the two panels are the words, "Inasmuch as ye did it unto these." Behind the entrance hall and library are cloak-rooms and a small committee-room. On the first floor is the large hall for society meetings, 45 ft. long, 33 ft. wide, and 17 ft. high, with a musicians' gallery near one end. This hall will seat nearly 200 and will dine about 120. It is fitted with double windows to deaden outside noises, and has facilities for various methods of illustrating lectures. Two portraits have already been presented to it, and no doubt in time others will be added.



Medical Institute, Belfast. Built and presented to the Ulster Medical Society by Sir William Whitla.

Behind the hall is the steward's kitchen and pantry, with facilities for serving dinner. By express wish of the donor no alcoholic liquors may be brought into the institute for the use of members except at the annual dinner or similar official gathering. On the second floor is a large billiard-room and the steward's apartments. The whole was built and equipped at a cost of about £8,000, and handed over by the donor to seven medical men to hold in trust for the Society. No rivalry exists between the Ulster Medical Society and the Ulster Branch of the British Medical Association or its Divisions, and every facility is given to them for holding their meetings in the institute.

ROYAL COMMISSION ON VIVISECTION.

FOURTH REPORT.

(Continued from vol. ii, 1908, page 1879.)

WE continue our abstracts from the evidence of which the minutes are contained in the fourth report of the Royal Commission on Vivisection, issued in December, 1907.*

ANTIVIVISECTIONIST TESTIMONY.

Evidence of Sir George Kekewich, K.C.B., M.P. (continued).

In regard to serums, they would be inclined to hold that more lives had been sacrificed by the introduction of these than if they had not been used. They had an instance in Koch's tuberculin. Asked what made him take 1729 as the year that he started from in regard to influenza, he said that was the first record of the invasion of influenza. He did not know that a particular bacillus had been discovered, but he was aware of the theory that the bacillus was not the *causa causans* of zymotic diseases generally. As he understood the theories, one was that the bacillus was the cause, the other that there was a poison surrounding the bacillus on which the bacillus fed, and that the bacillus was really a cleansing and curative agent. Asked by Sir William Church in regard to antipyrin and sulphonal, he said he was informed that antipyrin was very seldom prescribed now because of its effect on the heart, and that sulphonal was also not prescribed generally because of its cumulative effects. He got the information from a member of the medical profession. Asked if his informant told him that he did not use them, but that he probably used bodies closely resembling them which had also been introduced of late years, he said that he did not know. Asked as to his statement in regard to mice with tumours ("We are not told of means taken to restrict the growth"), whether he had ever made any inquiries as to what was done with mice when the tumours became large, he said he did not know that his association had ever either written or asked the Cancer Research Fund anything about the mice, or ever asked to be allowed to see them. Asked what led him to state that "there must necessarily, upon waking up from anaesthesia" (that was after operations on man), "be very severe and prolonged pain until the severed tissues heal," he said that was in the extensive cutting operations, with excision of organs. He should have thought that any ordinary layman would know that. Proceeding, he said the *précis* put in by him was prepared by the Parliamentary Association generally and their executive, and there were on it several members of the medical profession. He did not wish to mention their names. Mr. Stephen Smith was not one. Miss Arabella Kenealy was one and Dr. Bourchier, and he thought some others. In reply to further questions, the witness said he understood that the sanitary method of combating the disease was not taken to a very large extent in India—not to the extent, at all events, that it had been taken in Egypt. He took it that it was a great deal more difficult to effect complete sanitation in India than in a country like Egypt, which was more closely governed. He thought the people of India, whatever the Government might think, were gradually becoming converted to the view that he held, that the inoculation was actually causing plague amongst them. He had not heard that it was the attempt to put the rules of sanitation in force that had caused the unrest. He was not arguing merely that if they had taken measures of sanitation in India to the same extent that they had in Alexandria they would have stamped out the plague. He was rather arguing that if they had left things

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alone without the introduction of Haffkine's serum, the plague would have burnt itself out. Asked if other serums acted in the same way, he said he presumed that they produced disease in a modified form, otherwise no immunity would be conferred. Asked if his association had taken any trouble to inform themselves on that question, he said he had no doubt they had, but he could not possibly tell everything that the association had done. It was put to him that he had brought forward the plague in India as an instance without having any personal knowledge of the subject, and apparently without the association having taken very great pains or labour to investigate the subject. The witness replied that he did not admit that at all. He admitted that he had not had any experience from the point of view of a medical expert. Asked by Sir Mackenzie Chalmers if he had read the evidence of Dr. Martin, who had inoculated himself twice or three times, he said, No. Asked by Sir John McFadyean to what extent he had exercised his power of observation in judging as to the possibility of anaesthetizing animals sufficiently, Sir G. Kekewich said he did not mean observation in the sense that he had witnessed experiments on animals, for he had not. He was rather referring to observations that one had of pain in animals. It was then put to him by Sir John McFadyean that the Commission had had before it the President of the Royal College of Surgeons and the President of the Royal College of Physicians, and representatives of most of the universities, and a great many other medical men, and that they had been almost unanimous in their opinion that great advances had been made in medicine and surgery within the last fifty-five years, and most of them held that a great deal of that advance was due to experimentation on animals. The Commission had to weigh against that the evidence of the witness and that of a smaller number of persons, most of them non-medical, and he asked if the witness thought they would be violating the principles of common sense if they accepted the opinion of the majority in this case. The witness replied that one distinguished surgeon who was examined said he had rejected remedy after remedy until his remedies had been reduced to a number that he could count on the fingers of his two hands. That was Dr. Bantock. He had no doubt that he was one of the minority. Another answer he might make was that the fact that the majority was in favour of a thing was absolutely no proof that their opinion was right. That had been shown in medicine more than in almost any other line—more even than in politics. There was just as much common consensus of opinion in the medical profession years ago in favour of Lord Lister's antiseptic treatment of wounds; and as he understood at the present day Lord Lister himself had given up his antiseptic treatment. Sir John McFadyean said they had had evidence from distinguished surgeons who had scouted the view that the witness had just put before them, and they had really had no respectable evidence to show that what he had said was true. The witness said he could give other instances. In former days the medical profession was uniformly in favour of blood-letting and strong purgative treatment by calomel. All that was gone. Inoculation for small-pox was another instance, and that was gone, and yet it was supported by the great majority of the medical profession. His only point was that the majority were not always right, neither were they often right. Asked if he suggested that it was possible under the existing law and under the Act to experiment on animals for the purpose of instructing students without the use of anaesthetics, throughout the whole course of the experiment, and without killing the animal at the end of the experiment, the witness said, "Without killing the animal at the end of the experiment? I do not see in this Act any provision of this kind." Asked if he would take it that the Commission was satisfied that that was the state of the law, Sir G. Kekewich said he was not satisfied himself. He thought that any body of young men witnessing a series of experiments involving horrible cuttings of animals and practices of that kind would become degraded. In reply to another question, he said he had very great doubts whether man had the right to kill one of the lower animals. He knew perfectly well that it was possible to anaesthetize an animal under experiment. What he was in doubt about was whether as a uniform practice complete anaesthesia was obtained. There was a great deal of evidence that one had read in different places to the effect that complete anaesthesia was not obtained in these cases. He remembered seeing a series of lectures by Professor Crile, in the course of which it was shown by his own admissions that the animal did wake up and move its legs and its body. There was also evidence in a very considerable number of cases that the animals were not fully anaesthetized, and that the anaesthetizing was left to very incompetent hands. Asked if that meant that there was some difficulty in causing continuous efficient anaesthesia to animals like dogs, or if it was that there was a deliberate evasion of the Act, the witness replied that he took it that there were cases of both kinds. Asked to cite a case in point, or half a dozen, he said he could not carry these cases in his mind, but he certainly had read of a good many cases in which the anaesthesia was not complete. Miss Lind-af-Hageby affirmed that "the most unsatisfactory and obviously unreliable methods of anaesthetizing are in vogue in the vivisectional laboratories." That was the kind of evidence.

The following cases were subsequently forwarded:

1. In the BRITISH MEDICAL JOURNAL for November 10th, 1906, Dr. W. G. McCullum, recalling previous experiments, writes: "It will suffice to recall to your memory the fact that in dogs, cats, rabbits, monkeys, and many other animals complete parathyroidectomy is followed within a few days by the condition commonly described as tetany, in which convulsive spasms and rigidity of the muscles of all parts of the body render the animal almost helpless. Respiration becomes exceedingly rapid and laboured, profuse salivation occurs, and death supervenes in the attack, although occasionally the violent symptoms gradually give place to a stuporous condition which may last several days, terminating in death."
2. In Kirkes's (Halliburton's) *Physiology*, fifteenth edition, p. 287, it is stated: "Another experiment, originally performed by Salathe, can be demonstrated on a 'hutch rabbit.' If the animal is held by its ears with its legs hanging down it soon becomes unconscious; and, if left in that position for about half an hour, it will die."
3. In Dr. Crile's experiments upon "shock" the foot of a fox terrier was crushed under "incomplete anaesthesia." Dr. Crile states also in his book that when he applied flame to a dog's paw "the animal struggled on the application of the flame."
4. Professor Schafer experimented in drowning and resuscitating 36 dogs (2 without anaesthetics at all).
5. In a paper read at a meeting of the British Medical Association, at Toronto, Professor Cushny described a number of severe abdominal sections which he had performed upon dogs, cats, and rabbits to which no anaesthetic, but merely morphine, urethane, and paraldehyde had been given.
6. In the *Journal of Physiology* for August, 1906, in a paper on the Functions of the Thyroid and Parathyroid Glands, Professor Swale Vincent and Mr. W. A. Jolly, Assistant to the Professor of Physiology in the University of Edinburgh, record a number of experiments on monkeys, cats, dogs, prairie wolves, badgers, and rats from which the thyroid and parathyroid glands had been completely removed. They state: "Dogs, cats, foxes, and prairie wolves frequently suffer severely and die."

In reply to questions as to the evidence given by Mr. Hobday with regard to the ease with which animals might be anaesthetized and kept under anaesthetics for a long period, the witness said he was bound to believe what he said. He had always understood that morphine was used to deaden pain, but that it did not act as an absolute anaesthetic or stop pain, unless, indeed, it was given in an excessive dose so as to induce insensibility. Asked if he knew of any instances in which hideous torture had been caused under the Act, the witness said surely where experiments were performed without any anaesthesia there must be hideous torture. Asked if he knew of any case in which hideous torture had been caused by any experimenter in this country under the Act, he answered that it was impossible, under the conditions specified, that hideous torture should not be caused. It was very difficult to give any case of hideous torture, because, after all, the only fair witness as to hideous torture was the animal itself, and one could not examine the animal. With regard to influenza, what he said was that in 150 years the medical profession had not discovered either the cause of influenza or how to cure it. Asked if that was a failure to discover something by experimentation, or if he wanted to prove that it was impossible to learn anything by observation either, he said he thought they could learn more by observation—that, in fact, it was the only reliable source of information. Asked to explain how it was that this fact discredited experimentation but did not discredit observation, he said the medical profession

had discovered nothing about influenza, as to either its cause or its cure, by observation; but since they adopted experimental methods they had not succeeded in discovering anything more. Asked if he had ever heard of human influenza affecting any animal other than man, he said he never had, but he should have thought it could be communicated to animals. Asked by Sir Mackenzie Chalmers if he had inquired into it, he said he had no knowledge that influenza had been communicated to animals. In reply to further questions, he said that if influenza could not be communicated to the lower animals, and therefore could not be made the subject of experiments, he admitted that under those circumstances one might be wrong in saying or implying that the failure to discover the cause or the cure of influenza was in any way due to the failure of experiments on animals. Asked by Sir Mackenzie Chalmers if, when he said his association was anxious to abolish vivisection, he meant cutting operations or any animal experiments, he said the difficulty as to experiments was that there might be experiments in feeding or other innocuous experiments. They wished to abolish all experiments involving cutting or inoculation with any disease. That would include the use of animals used for the preparation of vaccine and the use of animals used for preparing antitoxin. Asked if he objected personally to using calves for the preparation of vaccine, he said he objected to vaccination altogether and also to antitoxin for diphtheria. Asked if his association would wish to prohibit mutilations of animals for commercial purposes, he said that gelding a horse was not an experiment. It was a matter of long custom. He would not, for instance, put down circumcision among the Jews. Asked if he would require it to be done under an anaesthetic, he said he really did not know that it was a sufficiently serious operation. He was afraid Moses did not use anaesthetics. Spaying cows would be on the same footing as gelding horses. In reply to further questions, he said he did not deny for a moment that inoculation might give a mild attack of plague and give immunity for a certain time. All that he desired to enforce was that these people who were inoculated might give the plague to others. Asked if he had considered how far plague was infectious or contagious, he said he had never observed cases of plague, but so far as one's reading went, one was in very great doubt as to what the means of communication of plague were. What between rats and fleas, and all the rest of it, one did not know any more than one did with many other diseases. Asked how he accounted for the fact that all the heads of the medical profession were unanimous in favour of the necessity of animal experimentation, he said they looked at it through medically coloured spectacles. He did not mean to say that they were not honestly biassed by considerations of so-called humanity. He agreed that they were the people who were in daily personal contact with disease, and therefore had more means of judging than others. Mr. Ram asked if the witness could suggest any reason why the heads of the profession and those who represented the universities and royal bodies, should wear glasses of one colour, and those who wore glasses of another colour should be few and not distinguished, the witness said he was not drawing a distinction as regards glasses between those medical men who were in favour of experiments upon animals and those medical men who were not. He was drawing a distinction between the medical profession generally and the general public. On Mr. Ram pressing the question how he accounted for the fact that all who were eminent were on one side and those that were not eminent and few in number were on the other side, the witness said they were not undistinguished on the other side. Surely Dr. Bantock was a very distinguished and very successful surgeon. Mr. Ram pointed out that Dr. Bantock gave evidence in favour of the necessity of vivisection, and again asked why it was that all the most eminent men advocated the necessity of experiments, if it was a fact, as the association thought, that experiments were useless. The witness replied that he really could not say why they all did. He imagined that they were perfectly honest in their view, but he imagined that the general public and the parliamentary feeling which they represented very largely had a right to their opinion. They looked round them, and they did not see any great advantage having been gained by these experiments, and they did not see that disease was less or that the population was becoming less degenerate. In reply to further questions, he said he did not think that medical science had much advanced since the time when he was a boy. Sanitary science had improved enormously. He thought great advances had been made in surgery, but he believed those advances to have been made by operating on the dead body and observation of the dead body, not on animals. Asked how operations on the dead body differed now from what they were fifty years ago, witness said he meant that our knowledge had come from operations on the dead bodies of human creatures rather than upon the living bodies of animals. He admitted that a great advance had been made in the treatment of wounds afterwards. Asked why it was more demoralizing to examine an animal under an anaesthetic from which it never could recover than to examine an animal which was dead, he said because to a layman the cutting and wounding and mutilation of living animals was the most sickening process one could possibly imagine. He felt it would be most demoralizing to him. Asked if he had any instance he could give of any person who to his knowledge had been demoralized or adversely affected morally after having performed experiments on living animals under anaesthetics, he said he did not think he could give any specific instance of any man who by indulging in experiments on animals had become a thief or a murderer, or even in other senses immoral. Asked if he could cite an instance of man becoming callous or inhumane, he said he could not imagine that any man could go through all those experiments without becoming demoralized. Pressed whether if he could tell of any man who, to his knowledge, had been adversely affected, he said of course he could not. If he did know of a man he would not be able to tell of him. Mr. Ram said he took that the answer was that he did not know any concrete case of that kind. The witness replied, Certainly. Asked by Dr. Gaskell if his association or himself during the whole of that year (since Professor Starling gave evidence on December 12th, 1906) had made any attempt whatsoever to accept Dr. Starling's invitation to visit his laboratory, he said, No, because they would be of no use. It was put to him that he had said that a man of common sense and intelligence, as he considered himself, would be able to judge on the subject as to whether a dog was properly anaesthetized or not. The witness replied, Yes, but in order to do that, what he would like to do would be to be able to see through a hole in the door without its being known that he was there. He did not say that there would be anything underhand or wrong about it, but he did say that if an observer was present special care would be taken. If they could get admission for a doctor whose views were in accordance with their own to see these experiments they would be very glad. For instance, there was a Dr. Hadwen who was very prominent in anti-vivisection societies. If they could get admission for him they would be very glad. If they could get admission for Miss Lind-af-Hageby he dared say it would be very useful to them, but for a mere member of Parliament or layman to go and witness experiments would be of uncommonly little use. In reply to Dr. Wilson, he said that on ethical grounds alone he would press for the total abolition of vivisection.

THE annual dinner of the West London Medico-Chirurgical Society is to take place at the Wharncliffe Rooms on February 12th.

UNDER the will of the late Miss Sarah Elizabeth Grumbridge of Brighton, the Brighton Eye Hospital and the Sussex County Hospital each receives a sum of £500.

THE twelfth International Congress on Alcoholism is to be held at the Imperial Institute, South Kensington, from July 18th to 24th, 1909. The Duke of Connaught has accepted the office of honorary president, and there is a distinguished list of vice-presidents. There will be general meetings each morning, as well as sectional meetings in the afternoon or evening, and an exhibition of publications and apparatus will be arranged. Further information can be obtained on application to the Honorary Secretaries, 34, Paternoster Row, London, E.C.

PROPOSED LEGISLATION ON ANAESTHESIA.

THE attention not only of the profession but of the public has during the past year or two been drawn to the subject of the administration of anaesthetics by the number of deaths which have occurred under their influence. A report of an important debate on the subject will be found in the *Transactions* of the Medico-Legal Society for 1907–8.[1] Dr. Hewitt moved that the two following motions should be forwarded in the name of the Medico-Legal Society to the General Medical Council and to the Privy Council respectively:

1. That in view of the importance of the administration of anaesthetics, this Society is of opinion that it is highly desirable, in the public interest, that every member of the medical profession, before he is registered, shall have received instruction in the administration of anaesthetics. It therefore earnestly begs the General Medical Council to consider whether they can see their way to include a course of instruction in anaesthetics amongst their requirements in regard to professional education.
2. That as the administration of any drug or drugs with the object of producing generalized insensibility to pain or actual unconsciousness for any medical and surgical purpose, or during childbirth, cannot be safely undertaken without medical knowledge and skill, your petitioners humbly pray that legislation be granted whereby the administration of any drug or drugs with either of the aforesaid objects by any person other than a duly-registered medical practitioner or someone acting immediately under his supervision, direction, and instruction be made a penal offence.

He said that it appeared that any person, qualified or unqualified, experienced or inexperienced, might administer an anaesthetic; and provided he did so to the best of his ability and with no unlawful motive, he was not likely to be punished or even blamed if death occurred. The General Medical Council did not make a course of instruction in anaesthetics one of its requirements, though it recommended that some instruction should be given. Dr. Hewitt said he had written recently to the twenty-two examining bodies of England, Scotland, and Ireland, and he found that only eight made it compulsory for candidates to have received any instruction in anaesthetics. The Society of Anaesthetists had, he believed, approached the General Medical Council, and had been told there was no room for another subject. Dr. F. J. Smith said that he thought the second motion contained a pious opinion which, he was afraid, would go the way which good intentions were said to go. He could not imagine the Legislature passing anything like an Act based on those lines, or interfering with quackery, of which perhaps nineteen-twentieths of its members availed themselves. He contended that if a man did his level best he was not responsible for any particular catastrophe. He protested against coroners holding inquiries in such cases. Professor Glaister of Glasgow said that during the last ten years he had made *post-mortem* examinations of the bodies of sixty-one persons who had died during the administration of anaesthetics, and he believed the number was greater than that. He was afraid the Legislature would be slow to give effect to the resolution before the meeting. He was inclined to believe that chloroform, instead of being a safe drug, was one of the most uncertain in its influence on an individual, because the factor which was not constant in the equation was the person to whom it was being administered. The statement that a large proportion of deaths under chloroform might be prevented must be received with caution. Dr. C. Templeman of Dundee said that at St. Andrews no student was allowed to graduate without having had several opportunities under skilled supervision of the administration of chloroform, but no certificate was required. All cases of death under anaesthetics in Scotland were inquired into by the Procurator-Fiscal. Dr. Waldo, Coroner for the City of London, and for Southwark, said that the reports of the Registrar-General of England and Wales for the five years 1902-6 gave a total of 786 deaths under anaesthetics used for operations, being an annual average of 157 deaths. In about a quarter of this number the anaesthetic given was not indicated. The sources of the Registrar-General's statistics were said to be (1) the coroner's certificate of the finding of the jury and (2) death certificates by medical practitioners. As regards the coroners' returns, Dr. Waldo said the practice of individual coroners differed. Some held inquests in all cases reported, whilst others selected particular cases for inquiry, notwithstanding the recommendation of the Coroners' Society in 1903 that "inquests should be held on all deaths occurring whilst under the influence of an anaesthetic, irrespective of whether the friends or of those specially concerned in the administration of the anaesthetic and the operation were satisfied or not." He added that, as regards the notification of deaths under anaesthesia by medical practitioners, these appeared to be almost entirely connected with deaths in public hospitals. The medical man, he said, was not compelled by any statutory obligation to report deaths under anaesthesia to the coroner, although, it would seem, he was bound by common law to report all deaths of a violent or unnatural character. The result was that the statistics of deaths under anaesthesia were practically of no scientific value. Among other suggestions made by Dr. Waldo was the appointment of a Royal Commission, with advisory powers, to inquire into the present facts of death under anaesthesia, together with all the official machinery for registration. Mr. Hubert Sweeney, Barrister-at-Law, held that, even when the medical man did his best, he should not be entirely exonerated from responsibility. As regards the suspicion which resulted from inquiries, he said suspicion would be ten thousand times greater if there were no coroners' inquests. The President, Mr. Justice Walton, agreed with Mr. Sweeney. In regard to inquests, the law was perfectly simple and plain. The difficulty arose from the facts. The law said that a coroner must hold an inquest if he thought the death was an unnatural death. The coroner was the judge, and if he had reason to think it an unnatural death, he must hold an inquest. That involved various questions. To apply it to death from anaesthetics, in the first place there must be reason to think that the death was caused by the anaesthetic; then the coroner had to consider whether death by the anaesthetic administered in the ordinary and proper course of medical and surgical practice was an unnatural death within the meaning of the statute. It seemed to him that it was really difficult to say what was an unnatural death. If death by chloroform was an unnatural death—and, therefore, if the coroner had reason to think that the death was a death by chloroform, he must hold an inquest—it seemed to the President to follow that, if the death was caused by an operation, that plainly would be an unnatural death, and there would be an inquest in every case in which a man died from an operation. The two things seemed to be on the same footing. The resolutions proposed by Dr. Hewett were carried.

A Bill to regulate the administration of general anaesthetics, the text of which was published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of December 5th, p. 302, was submitted by the Privy Council to the General Medical Council. Its two chief provisions may be summarized as follows:—(1) That no one but a registered medical practitioner should administer, or cause to be administered, any drug or substance with the object of producing unconsciousness during any medical or surgical operation, act or procedure, or during childbirth under a penalty not exceeding £10, and, in the case of a second or subsequent conviction, to a penalty not exceeding £20, unless the person was acting under the immediate direction and supervision of a legally-qualified medical practitioner, or if he had reasonable grounds for believing that delay in obtaining the services of a qualified medical practitioner would have endangered life. (2) That all examining bodies recognized by the General Medical Council should require that all candidates for final examinations should have received thorough instruction in anaesthetics, and should have personally administered anaesthetics under the supervision of their teachers.

The General Medical Council at its meeting last November approved the principle embodied in the first clause, but objection was expressed to the second on the grounds that it would override the functions of the Council, that the existing machinery was more effective, and that absence of a penalty would render the clause practically valueless. It was resolved that the Council should communicate with all the licensing bodies asking what steps

[1] Vol. v, Baillière, Tindall, and Cox, London, 1908. See also BRITISH MEDICAL JOURNAL, 1908, vol. i, p. 747.

they had taken to give effect to the recommendation of the Council of May 30th, 1907, that students should be required to produce evidence of having received practical instruction in the administration of anaesthetics. The reply of the Royal College of Surgeons of England to this circular was published in the BRITISH MEDICAL JOURNAL of December 26th, 1908, p. 1901. It was to the effect that the desirability of making instruction in the administration of anaesthetics a compulsory part of the medical curriculum was recognized by the Council of the College in 1901, and that in December of that year, in conjunction with the Royal College of Physicians, a regulation was adopted requiring any candidate before admission to the final examination to produce a certificate "of having received, at a recognized medical school and hospital, instruction in the administration of anaesthetics to the satisfaction of his teachers." It was added that questions on the subject are from time to time put to candidates by the examiners of the College.

In reply to a question by Mr. Bramsdon, the Home Secretary stated on December 14th that the General Medical Council did not see its way to support legislation to make practical training in the use of anaesthetics a compulsory part of medical education, but it was communicating with the various licensing bodies as to how far they have given effect to the Council's recommendations on the subject. On December 17th Mr. Bramsdon further asked the Home Secretary whether he would endeavour to obtain by means of an additional column in the next Coroners' Annual Return, the number of cases of death from anaesthesia upon which inquests have been held throughout the country, and whether he would further endeavour to obtain the number of deaths from the same cause reported to coroners in respect of which no inquests had been held. Mr. Gladstone replied that the forms for the next return had already been issued, but he said he would consider whether a special return can be called for. There the matter remains at present. We think, however, that a case has been made out for a comprehensive inquiry into the whole subject by a body competent to deal with it from every aspect, and trained to sift facts and weigh evidence. For this purpose it should include anaesthetists, general physicians and surgeons, coroners and lawyers.

Medical News.

UNDER the will of the late Mr. John Hodgson of Blackpool, the Victoria Hospital in that town and the Foxton Dispensary receive respectively £1,000 and £200.

AT a meeting of the Society for the Study of Inebriety to be held at 11, Chandos Street, London, W., on Tuesday, January 12th, at 4 p.m., Professor Arthur R. Cushny, F.R.S., will open a discussion on the action of alcohol.

THE King has been pleased to approve the appointment of Mr. H. H. Clutton, F.R.C.S., to the consulting staff of the Convalescent Home for Officers of His Majesty's Navy and Army, Osborne, Isle of Wight, as from Dec. 23rd, 1908.

AT the meeting of the Society of Chemical Industry at Burlington House, Piccadilly, W., on Monday next, at 8 p.m., Drs. S. B. Schryver and R. Lessing will read a paper on a physico-chemical method for comparing the antiseptic value of disinfectants.

DR. DUNDAS GRANT was recently presented by the amateur orchestra, which now numbers upwards of sixty members, including many members of the medical profession, of which he is the founder, with a conductor's desk. At the same time a silver rose-bowl was presented to Mrs. Dundas Grant.

AT a meeting of the Nottingham Medico-Chirurgical Society in December a resolution was passed expressive of its appreciation of the public services rendered by Dr. F. R. Mutch, who has long been an Alderman of the city of Nottingham, and recently laid down the office of Chairman of the Health Committee, after filling it with marked success for some eight or nine years. At one time Dr. Mutch was President of the Midland Branch of the British Medical Association.

THE St. Pancras School for Mothers, after a brief closure, reopened its doors on December 16th, 1908, at 37, Charlton Street, Somers Town. Little more than eighteen months have passed since this enterprise, with the assistance of Dr. Sykes, was started as a kind of *goutte de lait*, but the rapid success of the work and its growth in hardly anticipated directions necessitated the provision of roomier quarters. It is now a centre for health work of all characters, but the prenatal and postnatal care of the child is still its main object.

SOME important additions to the Macclesfield Isolation Hospital were declared open on December 9th, 1908, a feature of the proceedings being a distribution to those present of an account of all the work in connexion with isolation at Macclesfield since the year 1873. This had been drawn up by the present medical officer of health, Dr. J. H. Marsh, and in a series of paragraphs, each covering a period of two or three years, recorded everything done in this connexion by Dr. Marsh's predecessors in office and himself. As it stands the account throws an interesting light on the work which active medical officers of health have to perform, and the difficulties with which they may have to contend. The end of the story is that the locality now has at its command a building capable of accommodating fifty beds (including twelve for patients suffering from small-pox) and thoroughly equipped for its work in every respect. Dr. Marsh is to be congratulated on his successful completion of the task, and on the fact that the value alike of the possession of adequate means for dealing with infectious diseases, and of his own services, seems to be freely recognized in the area in which he works.

THE yearly report of the National Sanitary Department of the Cuban Republic is practically a summary of the monthly *Informe Mensual*, but it is a model of what such a publication should be, and indeed there can be few documents of this nature with a greater elaboration of statistics. The past year is of importance in the annals of the island as the first in which all the sanitary services passed into the exclusive control of the National Board of Health instead of being in large part under local management, and consequently inadequately equipped and trained. Had the National organization been in force at the time of the outbreak of yellow fever in Cienfuegos in August last, it is probable that the disease would have been more quickly mastered. Altogether, during the year, there were 168 cases of yellow fever in the island, of which 56 proved fatal, but only 6 cases occurred in Havana. For the statistician there are some points of interest in the report. Both in the case of white and coloured parents there is always, curiously enough, a marked preponderance of male over female children among legitimate births, while in illegitimate births there is a preponderance of female over male in the coloured people, persistent throughout the years apparently, and in the whites, though not an actual preponderance of females, a much lessened proportion of males, the numbers being nearly equal—34,810 males to 33,927 females. But it is noteworthy that in the statistics of the sex of stillborn children (it is to be regretted that no record of this nature is kept in England) there is a large preponderance of males—337, as against 240 females. The total mortality has increased during the past year, rising from slightly over 30,000 to 34,000; the annual death-rate being 16.99, which cannot be said to be high. The least healthy months were June and July, with 3,620 and 3,920 deaths respectively; the most healthy November and December, with 2,142 and 2,228.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on December 18th, 1908; Dr. de Havilland Hall in the chair. The accounts presented showed that the growth of the society was still satisfactory, the number of new entrants during the year being exceptionally large. The question of the investment of the large funds of the society once more occupied the attention of the committee, and it was resolved that the plan hitherto adopted of keeping one-half on liquid—that is, Stock Exchange—securities, and the other half in advances to local bodies and other similar more permanent forms of investment, should be continued. The forthcoming valuation of the business was discussed, and it was resolved that the calculations should be made upon the same tables of mortality and sickness experience and at the same rates of interest as on previous occasions. The sickness experienced during the autumn of 1908 has been exceptionally light; but several additions have been made to the list of chronic cases—that is, of members who are not likely ever to be able to resume professional work, and will accordingly in all probability draw the society's half pay, usually 104 guineas a year, until the limiting age of 65. This is a risk almost peculiar to the business of this society, and at each valuation a substantial special reserve is made in respect of it. Prospectuses and all further particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, W.C.

British Medical Journal.

SATURDAY, JANUARY 2ND, 1909.

THE MEDICAL ASPECTS OF THE PARLIAMENTARY SESSION.

THE session of 1908 was a long and a broken one. It was interrupted early in its course by the death of the Prime Minister, Sir Henry Campbell-Bannerman, and afterwards by the adjournment in August for the holidays before an autumn session, which lasted from the middle of October till Christmas week. The first period witnessed the announcement of eleven measures in the King's speech, of which four have been passed, two have been killed in the Upper House, three have been withdrawn (two of which will be introduced again next session), one has been dropped, while only one of the eleven failed to see the light.

But this record by no means accurately expresses the work of what, after all, was a very strenuous and productive session. Altogether seventy-three Acts of Parliament have been passed, and of these fifty-four were Government measures, sixteen were enacted on the motion of private members, and three were Departmental Acts, for which the Government was responsible. No mere array of figures can, however, give any idea of the real importance of the Parliamentary proceedings of the last twelve months. Social issues of the most far-reaching importance have been raised, and in some instances settled for the time on satisfactory lines.

The second period, which saw the accession of Mr. Asquith to power, was remarkable, and always will be remarkable, for the passing of the Old Age Pensions Act as part of the Budget. The third period of the session will be remembered for the rejection of the Licensing Bill by the Lords and the enactment of the Children Act and the Coal Mines (Eight Hours) Act, two measures of wide social and economic significance. The medical aspects of this kind of legislation do not obtrude themselves on the surface, but are nevertheless important. Old age pensions, which were first prominently advocated on political platforms by a medical member of Parliament, naturally commend themselves to a humane profession, as affording honourable support for the deserving poor in extreme old age. It was with this object they were first suggested, and in spite of the defects of the Act as passed, this object will be largely attained. But, as has been previously pointed out in the BRITISH MEDICAL JOURNAL, the grant of these pensions to some half a million old people will have a direct bearing on medical practice by throwing a considerable amount of work on Poor-law medical officers. Many thousands of aged persons who are now treated in workhouse hospitals, will in future require medical attention in their own homes, and as medical relief will not disqualify for the receipt of the pension, the parochial medical officer, in whatever form the Poor-law Commission may leave him in existence, will find plenty of work among the State pensioners of the future. We dwell on this point in no spirit of complaint, but rather to show how closely and inextricably nearly all social reforms are woven into the woof of medical work. A year or two back we were discussing and legislating for the feeding of half-starved children in elementary schools. It was only vaguely recognized as a medical question; but now we see all over England medical inspection of the children at school and a new class of medical appointments created, of great sanitary and scientific promise. Many similar illustrations might be given to show how even more and more closely social reforms must affect the profession of medicine.

The Children Act, which consolidates and extends State control as respects the life and health of children, will always honourably distinguish the Parliamentary output of 1908. Under it baby farming, which years ago this JOURNAL did much to reform, will be regulated, checked, and more adequately supervised. Vagrancy in its most pernicious forms as regards child life will be reformed, and the establishment of Children's Courts will rescue youthful offenders from association with criminals. The Prevention of Crime Act will also help in this direction by extending the reformatory system. Under the Children Act, too, the juvenile smoker will be frightened, if not suppressed, and a habit specially injurious to the young frowned on with State authority. We hope for much good from this Act as regards the humane, moral, and hygienic management of child life, and much from its educational influence in forming public opinion. Infant mortality and national degeneracy have long demanded such legislation.

The Act which restricts the labour of coal miners to eight hours' work underground is one which has always appealed to some medical thinkers on the general grounds which seek to limit long hours of physical toil, especially as regards the young and growing lads employed in the pits. It is the good of this latter class of coal workers which has always afforded the strongest argument for the measure.

The Irish Universities Act, which is one of the principal measures of the session, will, we hope, promote higher education in Ireland. There are some fears that it may adversely affect an existing medical school in Dublin, but we hope these fears will prove groundless. Should they not do so, it will certainly be the duty of the Government (and we think they admit this) to protect the interests of the College of Surgeons in its school out of common gratitude for the excellent work it has done for so many years.

In the Tuberculosis Prevention (Ireland) Act we have an experiment in legislation which may, if carefully and sympathetically administered, help to check the ravages of tubercle among the Irish people. There is a large field for useful work, there is lofty enthusiasm in high quarters for the crusade, and we hope every local authority will rise to the occasion and co-operate to work an Act that promises much to lessen human suffering and to save thousands of lives in a dwindling population. A recent Local Government Board order in England shows that the notification of tuberculosis is on the way to become law here, too, and that the State, if somewhat tardily and vaguely, is beginning to recognize its duty in stamping out preventable diseases.

The Act which forbids after next year the use of white phosphorus in the manufacture of matches, is another example of action of this kind, and is creditable to the Home Office. We may now look forward to the extinction of phossy jaw, and congratulate this country on at last placing itself in line with the other

nations which have prohibited since 1906 by the Berne Convention the manufacture and sale of matches made of this substance.

Lastly must be mentioned two great measures which failed to pass. The Licensing Bill had naturally a host of enemies, for it touched the most sacred of all political interests—property. This was fatal to it. All medical men are agreed that the repression of intemperance is an urgent problem, but there may be legitimate differences of opinion as to the manner in which the Government proposed to deal with it. The other measure that did not become law is the Housing and Town Planning Bill. In Committee, after many weeks of hard work it had been much improved, and would have made a workable, if not an ideal, Act. We are promised that it shall be brought up again next year, and we hope to welcome it then even in a better form than it left the Committee this last session. We trust that the improved position of medical officers of health will be still further extended and secured, and we think if the town-planning clauses were made into a separate bill that both housing and town planning would be more effectually promoted.

This cursory glance at the last session cannot close without the reflection that medical men as a class are deeply interested in watching legislation. They are the only men in daily touch with the health of the people, and know more than any other class how closely morality and well-being are bound up with the physical surroundings that influence health. Experience teaches daily how legislation, apparently remote, affects the doctor in his daily work and often touches his interests. As the progress of social reform advances this must become increasingly true, and Parliament, however unwilling, will have more and more to listen to medical counsel and guidance.

THE CAMPAIGN AGAINST TUBERCULOSIS IN BELGIUM.

THE annual report of the Belgian National League against Tuberculosis presents, in the evidence it affords of the organized enthusiasm displayed and the work actually accomplished, a striking contrast to the indifference shown by the public generally in this country. The Ligue Nationale Belge contre la Tuberculose was instituted in 1897 under the patronage and with the co-operation of the Société Royale de Médecine Publique et de Topographie Médicale de Belgique. Its object is to combat human tuberculosis by every means, but especially by disseminating information through the press and by lectures, by studying the preventive measures which should be adopted by public bodies, philanthropic associations, and private persons, and by the establishment of sanatoriums for the poorer classes.

The league is composed of persons of any rank or profession who are willing to join it, and of members of the Société Royale de Médecine Publique. It has as many sections as there are provinces. There is a general committee of thirty-seven members, upon which each province is represented, and an executive committee of eleven chosen from the general committee. The funds are derived from annual subscriptions, private donations, and grants from public bodies. The sections contribute in proportion to their receipts. The central office is maintained partly by an annual grant from the Société Royale de Médecine Publique and partly by a percentage paid by branches, and partly by gifts, subsidies, and other money contributed for the general purposes of the scheme.

The principal feature is the dispensary, which, where possible, works with the sanatorium or hospital, but at present there are more dispensaries than sanatoriums. The dispensary is careful not to trench upon the practitioners' domain, and it is made clear that patients are merely examined from time to time, given general advice, and, when necessary, practical assistance. It seems strange to read that, in spite of this, few doctors take advantage of the opportunities afforded by these institutions, at once scientific and charitable, where, besides valuable hygienic advice and literature, material assistance is given to deserving cases. Thus, milk, eggs, meat, and pocket spittoons are distributed, while suitable cases are sent to sanatoriums, the cost being defrayed by the mutual societies or by philanthropic individuals. When the enormous loss to the family of the working man thrown out of work is taken into consideration, the practical value of such assistance is obvious. The doctor of the dispensary visits from time to time the patient he sends to the sanatorium, notes the progress made, and endeavours to keep in touch with him after he leaves. Many, after a few months, resume their ordinary work, and appear to keep well. There is a tendency, however, on the part of the tuberculous to neglect themselves until the disease is far advanced and recovery improbable. Great difficulties are encountered in inducing them to realize the danger they are to other people, and it is found that patients in the most highly infectious state share rooms and even beds with their families, never dreaming that they are doing wrong. It is difficult to persuade them to move into a separate room, even though the dispensary pays for the rent and furnishing. There is not the same reluctance to go to a sanatorium.

One of the most interesting aspects of the work is to be noted in Antwerp, where the energies of the section are chiefly devoted to prophylaxis in childhood. The Villa Maritime pour Enfants Débiles at Wenduyne was established five years ago for delicate children born of tuberculous parents, for rickety, strumous, and lymphatic children, and for those suffering from internal tuberculosis. Here children are received from all over Belgium, and the results are admirable. The Hainaut section reports that, of 75 cases received during 1907 at the Galérie de Cure d'Air de Bois d'Havré, maintained by the four dispensaries of Mons, Tournai, Charleroi, and Ath, 45 per cent. were discharged cured and able to work whole time after an average stay of five months.

The movement, taken broadly, has three aims: Prophylaxis in childhood, the most vitally important of all; the education and possible cure of grown-up patients by means of the dispensary and the sanatorium; the isolation, in their own homes, of far advanced cases, who in the ordinary course of events may do much harm in spreading the disease. These last go probably in the first instance to the dispensary, and because, owing to the advanced stage of the disease, the dispensary cannot conscientiously send them, with any hope of recovery, to a sanatorium, they resent and grow tired of advice, and become enemies of the movement. They are not reasonable enough to blame themselves for coming too late. Up to the present nothing practical has been done for women, but as a sanatorium for them is about to be opened, they also will have their chance. More might be done for children, but, seeing that we in this country have done little or nothing for them,

we are not in a position to criticize a nation which has at any rate made a beginning.

Dr. Lentz, director of the Hainaut dispensaries, gives some interesting information as to the class of patients visiting these institutions; the rule was that no patient should under any circumstances be received at the dispensaries unless he could produce a certificate of his indigence. After careful observation, Dr. Lentz thinks this a mistake, inasmuch as it shuts out a large class of the population fairly comfortably off, but quite as much in need of advice and hygienic education as the poorer classes. The dispensary is unable, for financial reasons, to distribute relief continuously, and many of those patients who are assisted only attend during the months when such relief is being given; the most constant and conscientious are to be found amongst those who do not receive help, because they go voluntarily to the dispensary for advice and not from any ulterior motive. The material help given was greatly reduced with the unexpected result that after a few months a special class of patients began to attend. At first, owing to the rules of the dispensary, they were sent away, only to return armed with letters from their doctors, and begging for instruction in prophylaxis. These patients included the better-class workman, shopkeepers, and even the middle classes, who so long as the dispensary was limited to the necessitous poor considered it a loss of dignity to attend. In this accidental way was brought to light a class usually neglected because neither rich enough nor poor enough to receive special notice.

Perhaps in the present stage of ignorance of the subject by the general public the most far-reaching good is done through the press. In the Namur section alone Dr. Lefèvre has secured the co-operation of sixty-five papers, in which he deals from time to time with the history of the disease and the league's plan of campaign.

This great work might well be imitated in England where unfortunately we seem to have no general plan of campaign; hence the majority of our population are painfully ignorant of the theory and history of a disease which might be wiped out if each of us co-operated intelligently and conscientiously.

THE ANTHROPOLOGY OF SCOTLAND.

In an article published in these columns in 1907,[1] attention was directed to Mr. J. F. Tocher's valuable work on the anthropometric characters of the Scottish insane. The same worker has recently completed an important study of the pigmentation characters exhibited by the normal school children of Scotland.[2]

The survey was organized by a committee consisting of Sir William Turner, Professor R. W. Reid, Mr. J. Gray, and Mr. J. F. Tocher, and the expenses of the work were partly defrayed by grants from the Royal Society and the Carnegie Trust. Thanks to the care with which the details of the investigation were planned and the loyal co-operation of teachers, complete returns were furnished from 2,288 schools, containing the records of ages, sex, fraternal and cousin relationships, and colour characters of 257,766 boys and 244,389 girls.

Taking first the question of hair colour, it appears that about one-fourth of the children are fair haired, one-fourth dark haired, and the rest fall into two intermediate classes comprising the various shades of brown or medium and red hair. About 5 per cent. of the population have red hair. The distribution is markedly different from that of certain foreign countries in which a similar survey has been effected. In Prussia 72 per cent. of the children are fair haired, in Saxony 69 per cent. Even in South Germany the proportion is larger than in Scotland, Baden giving 58 per cent., Würtemberg 62, and Bavaria 54. In Scotland 22 per cent. of the children have dark brown or dark eyes, and over three-fourths blue, light, or medium. About 15 per cent. possess pure blue eyes, 30 per cent. light eyes, and 32 per cent. the varieties classed as medium. Germany as a whole has significantly more dark eyes than Scotland —32 against 22 per cent.

The pigmentary distribution is by no means uniform; thus, excess of fair hair and blue eyes occurs for the most part in North Scotland, including Orkney, Shetland, the Isle of Lewis, Ross, Cromarty, Elgin, Nairn, and Perth, with parts of Stirling, Forfar, and Fife.

It was found that regions of excess of dark haired, jet black haired, and blue-eyed classes are associated with regions of excess in Gaelic-speaking population. The correlation coefficients for dark hair and blue eyes with the percentage of Gaelic-speaking persons are 0.8126 and 0.8663 each, being more than three times the size of its "probable error" (for the particular case $r=0$). Although the effect of foreign immigration upon the characters of densely populated areas is demonstrated, it is pointed out that "neither the Highland, Irish, English, nor foreign "elements in the population account for the high "proportion of medium hair found in all densely "populated regions. These elements, however (ex- "cepting the English), where present, tend to increase "the proportion of dark and jet black hair." Mr. Tocher holds that the excess of medium hair in populous districts is probably due to the blending of colour in the offspring of fair and dark haired persons, a hypothesis which finds further support in the fact that, as a rule, medium hair is not associated geographically with any other tint.

It is shown that definitely more cases of imbecility, blindness, and deafness occur in Gaelic-speaking districts than throughout the rest of Scotland, which may be due to a greater rate of emigration from and relatively little immigration to the Highlands on the part of fitter stocks.

The special characters of the Glasgow population are discussed in detail and many factors are seen to be involved.

The degree of association between eye and hair colour deduced from these results agrees well with values already obtained from other British and foreign data. In a summary of some of the more interesting features, it is impossible to do justice to the admirable patience and accuracy which have been brought to bear by Mr. Tocher on the completion of his laborious task. It would not be true to say either that the memoir is very simple to read or that it is easy to avoid being confused by the wealth of details. We doubt, however, whether the reader's path could have been made smoother, and we congratulate both Mr. Tocher and his committee on an important contribution to anthropological literature.

[1] BRITISH MEDICAL JOURNAL, 1907, vol. i, p. 1204.

[2] Pigmentation Survey of School Children in Scotland, by J. F. Tocher, B.Sc., *Biometrika*, vol. vi (1908), pp. 150-235. (The complete data are published as an appendix to this part of *Biometrika*.) An account of Mr. John Gray's *Memoir on the Pigmentation Survey of Scotland*, published by the Royal Institute of Great Britain and Ireland, was given in the JOURNAL of July 25th, 1908, p. 212.

SHOCK AND ANAESTHESIA.

MR. STEPHEN COLERIDGE has for once done a useful thing. He sent a circular letter to the Vice-Presidents of the Research Defence Society misrepresenting in the manner familiar to our readers the evidence given by Dr. Dudley Buxton before the Royal Commission on Vivisection in regard to Dr. Crile's experiments on surgical shock, and insinuating that anaesthetics are not adequately given to the animals upon which experiments involving surgical operations are performed. He rings the changes on the expressions "light anaesthesia," "incomplete anaesthesia," etc., as used by experimenters, with the view of leading people ignorant of the subject to believe that they imply a condition of partial sensibility to pain on the part of the animal. We have given a full abstract of Mr. Coleridge's evidence before the Royal Commission on Vivisection.[1] In that evidence he furnished ample proof that the technical meaning of "incomplete anaesthesia" had been fully explained to him, and he admitted he had been told that the Home Secretary had caused investigation to be made into these experiments, and that the information received from competent persons, who either witnessed most of the experiments or had read the account of them, was to the effect that in no instance had the animals experimented upon been subjected to pain. Mr. Coleridge refused to accept the statement, amiably remarking that his point was that when experimenters said that "slight "anaesthesia" covered absence of pain, they said it to cover themselves from the Act of Parliament. In other words, his point is that all experimenters lie and break the law in the same light-hearted manner in which he gave the Commissioners the impression that he himself habitually violates the Motor Car Act. Mr. Coleridge's circular has had the effect of drawing a letter from Sir Victor Horsley, published in the *Times* of December 30th, which contains a statement on the subject of Dr. Crile's experiments, divested of all technicalities, which places the matter in a light that the most tortuous sophistry cannot obscure. After explaining that, as the experimental researches of Pasteur and Lister had removed the commonest cause of suffering and death after operations—namely, blood poisoning—there remained practically only one equally serious and general risk—that of shock—Sir Victor points out that it has become a paramount duty on the part of those to whom human lives are entrusted to endeavour to understand the causes underlying that risk. For the utility of any experiment designed for this purpose it is obviously necessary that a reproduction of the methods employed in ordinary surgical operations on human beings should be secured. He accordingly arranged in 1895 with Dr. Crile that he, following the usual operation routine in the administration of the anaesthetic, the nature of the incisions, the dividing or crushing of bone, the exposing and handling of the nerves or organs of the body, should begin by investigating the effect of such procedures on the circulation and respiration of the animals experimented upon. In pursuance of this scheme, each of the animals was anaesthetized throughout, just as in a regular operation, commencing with a massive dose, producing absolute unconsciousness, with an almost complete abolition of reflexes, followed by a diminution of the anaesthetic, which, while securing a continuance of the insensibility to pain, permits a return of certain reflexes. This is the condition which Dr. Crile termed "incomplete anaesthesia" and Dr. Buxton "light anaesthesia." The wording of these terms is nothing, the technical meaning being the same, namely, that the person, or in this case the animal, operated upon was insensible to pain. Sir Victor Horsley adds that on the completion of each experiment and before recovery from the anaesthetic the animal was killed by an overdose, and thus, from the first moment of the operation to the last was unconscious. Had, he goes on to say, Dr. Crile performed the experiments in the way Mr. Coleridge suggests, the whole purpose of the research would have been frustrated, and not only would the law have been broken, but the experimenter would have also shown himself incapable of performing his task. Sir Victor Horsley concludes as follows: "In view of all these facts, which have been "perfectly well known to Mr. Coleridge for about "ten years, and have often been published in the "press, as well as during the past year before the "Royal Commission, it appears to me unnecessary to "say more." We cannot help congratulating Mr. Coleridge on having been the means, however involuntary, of bringing before the public this clear exposition of a subject as to which there has been much misconception.

[1] BRITISH MEDICAL JOURNAL, January 4th, 1908, p. 31; January 11th, p. 90; January 18th, p. 155; January 25th, p. 209; February 1st, p. 266; February 8th, p. 333; February 15th, p. 395; February 22nd, p. 455.

PROPRIETARY CURE-ALLS.

IN the report on the composition of some secret remedies which we publish this week particulars are given of the results of the analysis of a few of those nostrums for which the most general and varied curative powers are claimed. The exposures of quack medicines which we have already made have shown that the most extravagant and ridiculous pretensions are advertised by the proprietors of some of these preparations belonging to practically every one of the classes dealt with; it is natural, therefore, to expect that among those for which the most general claims are made such pretensions will not be lacking. The particulars quoted show that the expectation will be fulfilled. Thus, one of the articles described is stated to cure such different disorders as constipation, rheumatism, St. Vitus's dance, heart disease, rickets, sleeplessness, kidney complaints, and women's special ailments, among many others, and is said to be "a "real elixir of life in solid form"; the facts as to its composition, ascertained by analysis, show what the possibility of its being a "cure"—for heart disease, for instance—is. Another of the nostrums dealt with this week is the "Pink Pills," advertisements of which are to be found in almost every daily and weekly paper. The method followed appears to be to recommend them for different diseases in different advertisements; personal testimony, or what is put forward as such, from sufferers who have been "cured" is made the basis of most of these, and illustrations are employed to catch the eye of the casual reader. Our analyst's report shows that these pills are practically the ordinary Blaud's pill, though of lower strength than usually prescribed, and to judge by the proportion of iron that was found to be in the higher state of oxidation, very carelessly prepared. They differ vastly, however, from other Blaud's pills in the price charged for them. Thus the proprietary Pink Pills are sold at a little over a penny each, while coated Blaud's pills can be bought retail at a few pence a gross, and wholesale in large quantities at a little over a penny a gross. Other analyses show the same disparity between the price of the drug supplied and the price charged to the person who is beguiled into purchasing; thus thirteenpence-halfpenny, two shillings and sixpence, and two shillings

and ninepence are the selling prices of nostrums the ingredients of which are estimated to cost respectively one-eighth, one-third, and one-tenth of a penny.

THE CANCER PROBLEM.

SEVERAL times during the last few years proposals have been made from various quarters that an international congress should be held to discuss the cancer question. When the inaugural meeting of the International Cancer Research Association was held in Berlin in the spring of 1908 a proposal was made—*officieusement*, to speak the language of diplomacy—that the first meeting of the congress should be held in London. The same proposal was again brought forward in a more definite form at the International Congress of Surgery held at Brussels last September, the year 1910 being suggested as the date. We understand that the matter was discussed at a recent meeting of the Executive Committee of the Imperial Cancer Research Fund, but the committee did not see its way to agree to the proposal, as it was felt that the time was not yet ripe for such a congress. We think this feeling will be shared by many of those who have been working hard at the cancer problem in recent years. The question is still in too inchoate a state to justify the assembly of an international congress for its discussion. This is shown by the fact that congresses on cancer held elsewhere have not been particularly fruitful of results. What is wanted at present is a concentration of effort and a co-ordination of research. Our own workers do all in their power to encourage international collaboration and give freely both of the knowledge they gain and of the materials on which it is based. But it is too plain that there is division of energies elsewhere. Quite recently, we learn from the *Berliner Tageblatt*, a meeting was held in Berlin to discuss a proposal made by Professor von Leyden to raise funds to establish a cancer hospital. Among those present were Herr von Moltke, the Minister of the Interior, Professor Kirchner, representing the Cultusminister, Professor Orth, Professor Renvers, the Kaiser's Chamberlain, the President of the Berlin Red Cross Society, Professors Hansemann, Georg Meyer, and Lazarus, the Treasurer of the German Central Cancer Research Committee, and several well-known financiers. Professor von Leyden having pointed out that other countries had already large hospitals for cancer, and that Berlin was behind in this respect, went on to state that within certain limits cancer could be cured by medicinal treatment. He himself had obtained good results in a few cases, though the lapse of several years was required to establish proof of cure. He dwelt also on the danger of infection, which made isolation necessary, and urged the formation of a committee. Professor Kirchner, speaking in the name of the Cultusminister, said the proposal needed serious consideration; to be frank, he said, research has at present not gone very far. Professor Orth was still more sceptical; the formation of a new committee, he said, would look like a vote of a want of confidence in the old. It would be possible only in the form of a subcommittee. He was also opposed to the whole idea of building a hospital for the internal treatment of cancer. So far, the only effective treatment was the knife. It would be better to continue the work of research. In reply, Professor von Leyden said that in his small cancer institution, where he treated from ten to fifteen patients, there were at least a few cases of improvement. He remembered the time when the possibility of a cure for tuberculosis was denied. Professor Lazarus said that there had been an enormous increase of cancer; in Prussia 1 out of every 1,500 persons fell a victim to the disease; in Berlin the number had risen in ten years by 4 per cent.; at present only 10 per cent. were cured, and that was by operation. If a cancer hospital was to be founded in Berlin, it should be for the treatment of the disease by operation as well as by medicinal substances. The Minister of the Interior opposed the establishment of a new independent committee; he agreed with Professor Orth that it should be connected with the existing committee. Professor v. Hansemann, speaking of the increase of cancer, said that it could now be recognized whereas formerly it could not. He disapproved of the establishment of a special hospital on the ground of humanity; every sufferer from cancer would think himself doomed when taken to the hospital. He affirmed that hitherto a cure had not been obtained by medicinal methods. In a second speech Professor Orth proposed that an institute for the investigation and treatment of cancer should be founded. This proposal was agreed to. It was also decided to form a committee in connexion with the Central Cancer Research Committee for the purpose of raising funds for existing cancer institutes and establishing others. This, we suppose, was by way of making a bridge for Professor von Leyden to get out of an untenable position. By all means let treatment of any kind that offers a reasonable hope of success be tried, so long as the patient's prospects of recovery by the aid of surgery are not imperilled. But let all cooperate to the attainment of a common end, that is, the discovery of a means of preventing or curing the disease which is most dreaded by the majority of mankind and which hitherto has defied all endeavours to find a certain remedy. Division of effort is obstructive to progress and confusing to the public, which would contribute more abundantly if the goal was more plainly in view.

THE RETURNS OF THE GERMAN SICKNESS INSURANCES.

IN discussing the returns of the German sickness insurance for the year 1906, Dr. A. Fischer[1] makes some extremely interesting observations. The total population of Germany is somewhere about 61 millions. Of this number, 11,700,000—that is, 19 per cent.—are insured against sickness. This percentage is the highest existing. In Austria only 10 per cent. of the population is so insured. The German sickness insurances are worked on several systems. Of these the most important are (1) the Municipal (*Gemeinde-*), (2) the Local (*Orts-*), and (3) the Works (*Betriebs-Krankenkassen*) insurance societies. The last named are the most active. The municipal insurances do the least for the insured; the works societies do the most for the workmen, but objection is taken to these organizations at times, as the employers are largely responsible for the management. The local societies do not support their insured quite so well. In 1906 the municipal clubs paid out as sick pay per member M. 11.28; the local clubs paid out M. 20.50; while the works clubs paid out M 26.30. It may be pointed out that the law has fixed a minimum in respect to the sick pay which the insured has a right to claim.[2] Not infrequently the societies pay in excess of this minimum. The contributions for the insurance against sickness vary between 1 and 1¼ per cent. of the daily wages of the labourers in the municipal societies, and between 2 and 3 per cent. of the average daily wages of the special class of workman in the works' societies. The local societies fix their contributions according to the benefits allowed, but the scales com-

[1] *Muench. med. Woch.*, November 10th, 1908.
[2] BRITISH MEDICAL JOURNAL, June 20th, 1908, pp. 1523-1524.

pare well with the other two. The first-named societies do not pay for funeral expenses, for confinements, or for the support of the families of sick workmen. After discussing the comparative membership of the three classes in the various parts of the German Empire, he turns his attention to the question of confinement allowances. During the year the expenditure under this head was nearly 5 million ma ks. The total amount expended by the sickness insurances was 104 million marks. Dr. Fischer compares the sums with those paid by the Hearts of Oak in England, which he puts at £360,000 for sickness and £44,000 for confinement allowances. The municipal societies have no provision for confinements, although this class of sickness insurance caters for a larger percentage of women as compared to men than either of the two other classes. In 1905, to every 100 men insured against sickness, 33.9 women were so insured. In the municipal insurances there were 51.5, in the local insurances there were 39.7, and in the works' societies there were 25.7 women to each 100 men. Dr. Fischer considers that, in view of this state of things, private enterprise should come to the assistance of women and a private "young mothers'" insurance should be instituted. A similar movement exists in France under the name of the *mutualité maternelle*.

DISTURBANCES IN THE PARIS MEDICAL SCHOOL.

Our Paris correspondent gives an account of certain disturbances which have recently taken place in the Paris Medical School, partly by way of demonstration against an unpopular professor, and partly by way of protest against a new examination which has lately been instituted. Professor Bouchard, President of the Board of Examiners, called in the police, and the Chief of Police in turn called in the Republican Guard. A good many heads were broken, but the examination was reduced to a farce, and the Faculty has closed its dissecting-rooms to first and second year students till March 1st. Professor Osler, who was an eye-witness, gives a clear account of the last and most serious of the disturbances. This occurred on December 21st. Those who took part in it, he says, were not students, "but men comparable in years and repute with the "assistant physicians of the London hospitals or with "the younger Oxford tutors—men of from 30 to 35 "years of age, many of them with European reputa-"tions. The examination was the *concours* for "*agrégation*, that is, for the *agrégé* professorships "for twenty places in all the branches in all the "medical schools of France. There were 128 candi-"dates. A new regulation had come into force by "which this was to be a preliminary *concours* of ad-"missibility, an examination in elementary subjects—"anatomy and physiology." This has been most unpopular because, we may say parenthetically, it virtually amounts to the exclusion of all but men who can afford to leave their practices or their scientfic work in distant places for some months in order to revise their early studies. Professor Osler says the senior men protested energetically against the invasion of the school precincts by the police. When the jury, or board of examiners, walked in headed by Professor Bouchard, they were greeted by a storm of protests. The examination was adjourned till December 24th and then only a small fraction of the candidates took any part in it. It was then adjourned *sine die*, but the incident is not yet closed. A deputation waited on M. Clemenceau, who gave it a sympathetic reception and expressed disapproval of the action of the police. The original *casus belli*, the new preliminary examination, is to be considered by the Government. While regretting that the disturbances should have occurred, we feel bound to protest against some remarks in which the *Times* has thought fit to indulge on the subject. It says: "For some reason that seems to invite pathological "inquiry, the medical man in his larval stage is "peculiarly addicted to rowdyism. Students in other "faculties, though exhibiting some youthful exuber-"ance, give, upon the whole, satisfactory indications "of the grave demeanour they are to assume in "after-life." It goes on to ask if there is some subtle connexion between study of physiological disorders and sympathy with disorder in the body politic, and if the course of study inoculates a naturally mild and peaceable youth with the virus of insubordination? Our esteemed contemporary is half a century behind the times. Medical students of the present day are no more rowdy than other young men of high animal spirits; indeed, they compare favourably in this respect with the "men" of Oxford and Cambridge who find amusement in the senseless smashing of property and other diversions which bring them in contact with the vulgar policemen, of whose coarseness an Honourable and Reverend gentleman has recently so pathetically complained. They compare still more favourably with the young officers who find an outlet for their exuberant vitality in foolish and often cowardly "ragging." We are speaking for the British student. Professor Osler, who also protests against the charge of special rowdyism made against medical students by the *Times*, has a good word to say for those of Paris. He says that, as he has seen him during the past three months at work in the hospitals, the Paris medical student is a very hard-working fellow, keenly alive to the importance of scientific and practical medicine, and with a charming touch of human sympathy with the patients entrusted to his care. *Pace* his belated traducers in the *Times* and elsewhere, exactly the same thing may be said of the medical student of London and other schools in the United Kingdom.

COMPULSORY OPERATIONS AND THE COMPENSATION ACT.

The vexed question whether a workman can be compelled to undergo an operation which will tend to increase his powers of working has recently been decided by the Court of Appeal. In the case which came before that tribunal it appeared that the claimant's foot was injured on February 18th, 1907. The foot was treated at a hospital, with the result that, after two or three small operations, the second toe and part of the big toe were removed. As the applicant still suffered some pain, a skiagram was taken which showed that a piece of bone, detached at the time of the accident, was loose in the stump of the big toe. Compensation had been paid at the rate of 14s. 10d. down to May 4th, 1908, when the applicant agreed to submit himself to an examination by his own doctor and the employer's doctor, and to do what they advised him. They advised a simple operation, but he refused to undergo it. The employers then went to the county court judge to have the compensation reduced. The judge found that the operation was simple and without risk; that the applicant had good health; and that it was doubtful if the applicant's toe would ever recover without an operation. He also found that the operation was one to which any man of ordinary nerve would submit in his own interest. As he felt bound by a previous decision of the English Court of Appeal, he felt that he could not reduce the compensation. The Court of Appeal, however, pointed out that in the case to which

the county court judge referred it had been expressly found that the operation which it was sought to make the workman undergo was attended with very considerable risk. After stating that the finding in the present case was quite different, the Master of the Rolls said: "Without saying that a man can be compelled to "undergo an operation, I say that, in my opinion, if an "operation is not performed, the continuance of the "incapacity will be due, not to the original accident, "but to the unreasonable conduct of the workman in "refusing to submit to an operation." Lord Justice Moulton said: "If the respondent's case is right a man "may have a wound, however small, and by refusing "to have it dressed he may get a sloughing sore which "will totally incapacitate him. It is not possible to "draw the line between dressing and operation; the "distinction to be drawn is between reasonableness "and unreasonableness." In the event the case was sent back to the county court judge in order that he might review the compensation allowed to the workman. This is the first case in which the English Court of Appeal has virtually declared that a workman must undergo an operation. The Court of Session in Scotland had reduced an applicant's compensation where he had refused to undergo a simple operation, and the fact that the Court of Appeal has adopted the same principle ought to have a good effect. It would be difficult to imagine anything more prejudicial than the adoption by the courts of a hard and fast rule to the effect that partial disablement which might be cured by an operation should entitle an injured workman to compensation for the rest of his natural life.

THE ORGANIZATION OF CONGRESSES.

THE demand for reform in the organization of congresses is not new. Defects in organization lead to defects in working, and result in failure and dissatisfaction. For some years it has generally been recognized that this work should be in the hands of a central permanent committee. This is the only way in which the perpetuation of mistakes can be avoided, and to ensure that future congresses will be arranged on a workmanlike basis. The essential object of a congress is, of course, the furtherance of knowledge by discussion. To achieve this end competent persons should exercise a wise discretion as to what should be discussed and by whom the discussions should be opened. That this is by no means always done appears from the programmes. No useful purpose can be served by crowding the day with an unmanageable number of papers on various subjects No furtherance of knowledge is gained by allowing a man to get up and to repeat what he said last year and the year before last. No benefit can be derived by personal controversies on the question of priority or by personal attacks on professional brethren. And yet such things are not uncommon at congresses. It is necessary on various grounds to make a selection among the communications offered. All this can only be done by careful consideration of experienced men, well versed in the subjects of the special congress. The modern congress is apt to miss the mark in another respect. It is often stated that one of the chief advantages of a congress is that it gives opportunities of making personal acquaintance with fellow workers who live at a considerable distance. It is therefore well to supply opportunities for the members of a congress to come together in private as well as in public. But this end is scarcely attained by the arranging of great and lavish feasts, by the securing of a gala performance at the opera or theatre, by organizing a bull fight or by other similar means. Dr. Mamlock[1] takes a sensible view of this part of congress arrangements and shows in figures the cost of a variety of congresses. Within the last twenty-five years, the city of Berlin has spent nearly £14,000 on congresses. The highest figure mentioned is that of £3,555 for the meeting of the German scientists and physicians in 1886. Without going into minutiae with regard to the amounts spent in entertainment, *Festschriften*, and other forms of literature supplied gratuitously, it may be interesting to quote this author again with regard to the multiplication of congresses within recent years. He finds that in 1883 only seven were advertised in the *Deutsche medizinische Wochenschrift*, whereas last year the number had increased to forty-one. He maintains that the increase in number does not mean a corresponding increase in scientific importance, and quotes v. Graefe, who is said to have summarized a congress as follows: "I had a veritable 'next morning' feeling in my "whole body: learned nothing, talked big, and only "enjoyed room atmosphere and poisonous restaurant "dinners." The remedy is not to be sought in the doing away with all social functions, which must be among the attractions of a congress. To limit the expense of the entertainments; to arrange for the publication of the proceedings on sound business lines; to make the members pay for their theatre tickets—all this does not mean to exclude all social intercourse, and admits of ample private exchange of views on science and other matters. The disclosure of this wanton extravagance, however, drives us to the conclusion that the ideal congress is still a long way off.

[1] *Deut. med. Woch.*, November 26th, 1908.

COWS AND TOOTHBRUSHES.

WE have often had to comment unfavourably on the nature of the announcements on medical subjects appearing in the lay press. As a rule, they are either calculated to make the "flesh creep," or to raise hopes that are impossible of fulfilment. In justice to the latest of such announcements it can be fairly claimed that, in spite of its title and theme, it is not likely to cause undue alarm in the public mind. In the chief page of the Christmas Day issue of the *Daily Telegraph*—no doubt inserted as a seasonable novelty for its readers—is a paragraph entitled "dangers of milk." It would seem that Dr. Tanner, of fasting fame, is now "preaching a health campaign at "Los Angeles." We learn that "Dr. Tanner is con-"vinced that bovine teeth harbour many germs "hitherto unsuspected, and that these frequently con-"taminate children's milk, producing all kinds of "complaints which his fellow practitioners have "talked wisely about but do not in the least "understand. He recommends that the teeth "of all dairy cows should be cleaned twice "daily, and says that this law should be compul-"sory." It is well that this important pronouncement should receive prominent notice and not be lost to the world. The doctor, who is evidently learned above his fellow practitioners, might have gone a step further and given some directions as to the method of carrying out this bovine dental toilet. Of a well-known character in Chaucer it is recorded, "He scrubbed his mouth with sope and eke with "sand." But both soap and sand might possibly be objected to by the learned doctor on the ground that they might travel by the same route as the malevolent germ, and find their way into the milk. We would suggest in place of either of them the employment of the toothbrush. As in the case of the Scot with the ample nose regarding the use of snuff, the cows with their dental development would afford "gran' accommodation" for the implement proposed.

Again, as the germs are not likely to be restricted to the regions of the teeth, but would probably find a location in other parts of the mouth and pharynx, we would further suggest that each cow should be supplied with an antiseptic gargle as an addition to the toothbrush. Thus fully equipped for the encounter with the germs, we might feel regarding the cows, in the words of Mrs. Bangham on the arrival of Dr. Haggage at the impending accouchement of Mrs. Dorrit, "Now we are complete."

CAMBRIDGE WATER SUPPLY.

EXCEPT in a very few instances, where the supply is derived from wells, the inhabitants of the town of Cambridge obtain their water supply from the mains of the Cambridge University and Town Waterworks Company. The company's sources of supply are from a spring and from wells sunk in the Lower Chalk and through the Chalk and the Gault into the Lower Greensand. A considerable population resides in the neighbourhood of the sources of supply in Cherry Hinton and Fulbourn, where there are about 150 and 310 houses respectively. These two villages are about a mile and a half apart, and nearly midway between them is situated the county lunatic asylum. For several years past attention has been directed to the possibility of the pollution of the water supply, and more especially since the occurrence at the asylum of an outbreak of typhoid fever in 1905, concerning which a special report was made by Dr. Bushell Anningson and Professor Sims Woodhead. Subsequent reports were made to the Cambridge Town Council by the medical officer of health (Dr. Duncan Forbes), and at the request of the Senate of the university and the town council an inquiry into the question was held in February last, on behalf of the Local Government Board, by Dr. Theodore Thomson and Mr. P. M. Crosthwaite. In the report upon this inquiry, which has just been issued, the inspectors state that they do not consider there is risk of dangerous pollution of the water supply from the asylum sewage, for the field in which it is treated is nearly a mile distant from the sources of supply, and experiments with fluorescin made by Dr. Monckton Copeman in 1905 demonstrated that the flow of the underground water was very slow. The report points out that careful and competent observers have shown recently that the period of vitality of the bacillus of typhoid fever in water is of short duration. With regard to the possibility of pollution from the villages of Cherry Hinton and Fulbourn a very different opinion is expressed. In both places there are inadequate and imperfect sewers, and many of the houses have connected with them cesspits which leak into the surrounding ground. The inspectors therefore express the opinion that in order to secure from contamination the supply of water to the town of Cambridge the whole of the supply which is derived from the Lower Chalk should be abandoned and only that should be utilized which is obtained from the Greensand, although they are careful to point out that supplies from the Chalk may be resorted to if these can be obtained from districts not open to the risk of dangerous pollution.

A HEREDITARY barony has been conferred on Professor von Koranyi on the occasion of his retirement. This is said to be the first time such a distinction has been conferred on a Hungarian physician.

THE *London Gazette* of December 25th, 1908, announces that the King has been pleased to appoint Harold Robert Dacre Spitta, M.D., B.S., D.P.H.Camb., to be Bacteriologist to His Majesty's Household.

KING EDWARD'S Hospital Fund, the Metropolitan Hospital Sunday Fund, and the Hospital Saturday Fund have issued a fresh circular upon the revised uniform system of accounts. The circular, which has been drafted with the advice and approval of Mr. John G. Griffiths, F.C.A., takes the form of supplementary notes dealing with questions which have arisen out of the first year's experience of the revised system, and includes amended forms of income and expenditure account, balance-sheet and statistical tables of expenditure upon in-patients and out-patients. The amended regulations are binding upon institutions applying for grants from either of the Funds.

AT a special general meeting of the Metropolitan Counties Branch on December 30th, 1908, under the chairmanship of Sir Victor Horsley, President of the Branch, a motion was made to instruct the Branch Council to petition the Privy Council with a view to securing such amendments in the Charter as will provide (1) that a Referendum be taken on the decision of the Council, and (2) that it be taken by means of a letter to every member of the Association. Subsequently the following amendment, moved by Dr. Lauriston Shaw, seconded by Dr. Hugh Ker, was adopted by a large majority: "That this meeting of "the Metropolitan Counties Branch, recognizing that "the provisions of the Charter as finally drafted are "the outcome of exhaustive discussion and of ulti- "mate agreement by the properly constituted authori- "ties of the Association, and being confident that any "reasonable changes subsequently asked for by the "Association will not be refused by the Privy Council, "is of opinion that the best interests of the Associa- "tion demand that every member should loyally "support the application now being made, and should "postpone all attempts to obtain amendments of "the Ordinances until the Charter has been formally "granted."

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Parliamentary Session.

THE record of the session of 1908 presents many features of interest. In the first place it was very prolonged, for, beginning in January it ended only on December 21st, and Parliament sat in eleven months out of the twelve, although only one day was so occupied in August. In spite of notable failures to pass Government measures it was a productive year as regards legislation; out of 308 bills introduced 73 became law, and private members succeeded in passing 16 out of the 230 measures proposed by them. The 57 Acts which the Government have added to the Statute Book out of 78 introduced comprise several of first-class importance. Those dealing with Old Age Pensions, Irish Universities, the Port of London, the Hours of Coal Miners, the Prevention of Crime, Scottish Education, and Children, make a total which would distinguish any session of recent years. The failure of the Licensing Bill in the Lords and the rejection of two Scottish Land Bills by the same House, added to the withdrawal of the Housing and Town Planning and Education Bills, must be counted on the other side as disappointments, some of which may be remedied next year.

The Commons indeed were promised an early reintroduction of the Housing Bill, and as this measure contains many proposals calculated to improve public health, and proposes to require the appointment of county medical officers of health in every county with security of tenure and wide powers of supervision, the profession will anxiously look forward to its early reappearance. In the interests of housing and public health, which are inseparably connected, it is the duty of the Cabinet to see that the weeks of patient labour spent on this Bill in the Grand Committee should not be lost.

The Children Act, which is likely to prove a valuable addition to the Statute Book, also occupied a Grand Committee for many weeks. In this case prolonged labour has met its reward in the enactment of provisions calculated to safeguard infant and juvenile life and add to the well-being of future generations.

In the provision of old age pensions for persons of 70 years and upwards the Government have in the same spirit of State beneficence dealt with the other extreme of human existence. These two Acts are alone sufficient to make the Session of 1908 memorable.

In their list of successes the Government have to be credited with the Tuberculosis Prevention (Ireland), the Lunacy, the Poisons and Pharmacy, the Public Health (Markets), and the White Phosphorus Matches Prohibition Acts. All these will prove useful, and the first-named will be watched with special attention as an experiment made to stamp out the scourge of tuberculosis in Ireland, where the death-toll is greatest. Phosphorus necrosis will also disappear under the provisions of the Act prohibiting the use of white phosphorus.

The enactments about markets and lunacy, however, deal with administrative details less directly touching on medical interests.

The Poisons and Pharmacy Act settles a long-standing dispute as to the position of companies trading as chemists and druggists. The compromise arrived at requires the drug stores to have a qualified chemist in charge of each dispensing department, and also a qualified chemist as the general manager. This company trading in connexion with callings that are founded on special and expert knowledge is not to the advantage of the public, and any extension of it in the direction of medical practice will have to be jealously watched and prevented.

The sixteen Acts passed by private members have little or no relation to public health; and only two—the Coroners (Ireland) Act and the Housing (Ireland) Act—are remotely connected with medical work. In the list of 230 bills introduced by private members, there are, however, many of much importance to the profession. For instance, there were no less than six bills brought in to suppress experiments on animals, and late one night in February Sir F. Banbury got an opportunity of moving the second reading of the Dogs Protection Bill. An Irish member, Mr. Mooney, opposed the motion, and in spite of an attempt to invoke the closure, the bill was talked out. This incident enforces the lesson of constant vigilance, for the question will have to be debated and decided at no distant date.

There were three bills for the registration of nurses before Parliament this session, and one of them passed the House of Lords, but came down to the Commons too late to make progress. Next year this bill may have more success.

There were some half-dozen proposals dealing with public health, one dealing with water rights, one with sewers and drains, and one, the Public Health Officers Bill, which seeks to give security of tenure to medical officers of health and sanitary inspectors. This measure, which has been introduced for many years, has at all events educated opinion to some extent, as its principle has been partially adopted in the Housing Bill of the Government. The question of death registration aad certification seems likely to attract attention in an early session, for two bills on this subject were introduced in 1908. A bill which dealt with coroners' inquests and proposed to abolish, as far as jurors were concerned, the viewing of the body, had an unusually hard fate, as it passed all its stages in the Commons fairly early, but could never get a third reading. Sir John Tuke again introduced his measure to prohibit medical practice by companies, and Mr. Cathcart Wason the Parochial Medical Officers (Scotland) Bill, but neither obtained a second reading.

Infant Life Protection interested several members, and so did the Purity of Milk Supply, for which Mr. Watt introduced proposals to apply to Scotland. We cannot help thinking that in this matter the Local Government Board have been remiss. Early in the session a bill was promised by Lord Carrington in the Lords; Mr. Burns, repeatedly questioned on the subject, led the House to expect at least the introduction of a bill, but nothing was done. It is a question of great urgency in connexion with public health and the prevention of tuberculosis, and ought to be dealt with at the earliest date next session. As far back as last March there was a debate of much value on the clauses dealing with milk supply in the London County Council (General Powers) Bill, and the President of the Local Government Board then gave pledges of legislation which urgently need to be fulfilled.

As in other years, questions were the means by which attention was called to many medical topics, and in this way very useful work was done by many members. These inquiries took a very wide range, as will be seen from the following list of some of the subjects on which Ministers were interrogated: Sleeping sickness, British and German death-rates, lead poisoning, tuberculous meat, anthrax, vivisection, Malta fever, the Inebriate Acts, milk supply, the College of Surgeons and its members, first-aid certificates, industrial accidents, glanders, nurses and medical certificates, the death-rate on the Rand, factory inspection, beer and lunacy, vaccination prosecutions, beri-beri, pensions and out-relief, rabies, ventilation in the House of Commons, infantile ophthalmia, vaccination fees and Poor-law salaries, female medical officers at the Post Office, London ambulances, the Notification of Births Act, the new buildings of the British Medical Association, London University, the telephone and disease, tuberculosis in the army, medical referees, training of nurses, standards for food preservatives, medical inspection, medical fees under the Midwives Act, deaths under anaesthetics, vaccination officers' fees, plague, Belfast Health Commission, Poor-law children, cancer research, etc. Questions are becoming more and more important in the Commons as a means of directing attention to specified subjects and as an effective method of educating opinion both in the House and outside. Medical men would do well to communicate from time to time with their representatives in Parliament with a view to having questions put on matters affecting the profession.

The much greater use of grand committees for the committee stage of bills has deprived the proceedings, as published, of many interesting debates on some special topics. When the new regulations for reporting day by day the proceedings of Parliament come into operation this will be to some extent remedied. In 1908 there were certainly many discussions in committee on the Children Bill, the Housing Bill, and the Tuberculosis Prevention Bill which were of medical importance. In the general debates in the two Chambers there were not as many references to medical questions as in some sessions. We miss the old-fashioned controversy over the Army Medical Department, which was not adequately replaced this year by the short but interesting criticism of the Naval Medical Establishment. There was, as already said, a good discussion on milk supply on one occasion which we trust will bear fruit hereafter, and on the Local Government Board Vote there was a good deal of comment made on the Tuberculosis Commission and its work and expenditure. The Home Office Vote also called forth from its perennial critic, Sir Charles Dilke, some very interesting remarks on child labour in factories, and the baneful effect of the employment of married women in factories on infantile mortality. There was also, before the Whitsuntide recess, an interesting conversation on the increase of accidents under the Factory and Workshops Act, and a committee was promised to investigate and report.

Looking at the work of the Session as a whole, it may be regarded as affording plenty of evidence of the vitality of medical questions in both Chambers. If topics for larger treatment have been lacking, all the points bearing on the profession and on public health have found their advocates and critics, who have efficiently safeguarded the general weal.

England and Wales.

FROM OUR SPECIAL CORRESPONDENTS.

MANCHESTER AND SALFORD

THE MANCHESTER UNIVERSITY UNION.

THE officials of the Manchester University Union must be congratulated on the success of the annual soiree held at the university. The guests were received by the Vice-Chancellor, Dr. A. Hopkinson, and Mrs. Hertz, and by the Chairman of the Union, Mr. A. Haworth, and also the Chairman of the Women's Union, Miss M. McNicol. There was the usual comprehensive list of entertainments going on in almost every part of the college, though, perhaps, the scientific exhibits were not so numerous as formerly. Exhibitions of fancy glass blowing and demonstrations by a potter of the use of the potter's wheel, and numerous biological and chemical exhibits, served to fill up the intervals between other entertainments of a less scientific character. The University Dramatic Society gave an excellent rendering of a costume play—*Hal, the Highwayman*—while in another place Mr. Hamilton Irving gave delight with his lightning sketches. It is expected that the union will take up its abode in its new home by the end of the next session. The new premises will cost about £9,850, exclusive of furnishing, and the committee, of which Sir William Mather is chairman, has collected about £8,400. It is calculated that about £2,700 more will be needed to open the new building properly furnished and free of debt. As the Chairman of the Union, Mr. Haworth, said: "In a non-residential university like that of Manchester, where only 12 per cent. of the student ive together, a large and well-equipped union is of first importance. A common ground, where men of different schools may meet together within the university, is not merely socially desirable, but is an indispensable feature of true academic life."

INFECTIOUS DISEASE CERTIFICATES.

It is only fair to the sanitary officials of the Swinton Urban District Council to suppose that they can hardly have realized the full import of a certificate which they are asking medical men to sign who have been attending infectious diseases. The request that the certificate should be signed comes from the inspector of nuisances at the District Council offices at Swinton, and the certificate is in something like the following terms: "I hereby certify that I have this day examined ———, residing at ———, and find him *entirely free from infection*, and in my opinion the room or rooms may now be disinfected. Signed ———, medical practitioner in attendance." It is to be hoped that no medical man will in a thoughtless moment append his signature to any document stating in such definite terms that any patient is "entirely free from infection." It is unfortunately the fact that there is still great uncertainty about the duration of infection in certain diseases, and it is practically impossible to tell when a patient is quite free from infection after either scarlet fever or enteric fever. The discovery of so-called "carriers" of these diseases, who, when they are apparently quite well themselves, remain capable of carrying and conveying to others the infection for an almost indefinite period should warn medical men against too dogmatic statements not justified by the present state of knowledge. Another consideration should also weigh, for such a certificate might well afford grounds for an action at law if another case should occur in a house where a previous patient had been unequivocally declared to be entirely free from infection. The number of return cases that occur after dismissal from fever hospitals should be a warning that with the greatest care and the utmost skill it is as yet not possible to say when a patient is free from infection. Return cases of scarlet fever are the greatest bugbear of the hospitals, and reduce the medical staff almost to despair at times, and the medical superintendent of at any rate the Salford Sanatorium has for a long time very wisely refused to sign any such definite certificate as that which the Swinton sanitary officials ask for.

AMBULANCE ARRANGEMENTS IN TIME OF WAR.

The annual prize giving in connexion with the East Lancashire Territorial Division of the Field Ambulance took place on December 19th, 1908, at the Manchester head quarters. Lieutenant-Colonel J. Bently Mann presided, and said that under the Territorial scheme three field ambulances were being organized, commanded by Colonel Fairclough, Colonel J. W. Smith, and himself. Each of these ambulances had a strength of 230 officers and men, including transport sections. Two of the sections were trained at the Manchester head quarters, and each field ambulance had one outlying section stationed respectively at Bolton, Burnley, and Bury. The general hospital for the use of the division in time of war consisted of 500 beds; it was under the superintendence of Professor Wright. In addition sanitary squads for field work, both in peace and war, were being organized, but so far the names of 26 men only had been received, whereas a detachment should consist of 98 men. Their duties were to prevent disease in the training camps by supervising the water supply and general arrangements. The nursing staff was being organized by the matron of the Manchester Royal Infirmary, and a large number of physicians and surgeons of Manchester and the surrounding district had volunteered for service in the general hospital in case of emergency. Colonel Coates, C.B., the Administrative Medical Officer, in distributing the prizes, said there was a great need of nurses who, when war broke out, would undertake nursing in the general hospital. There was a good deal of misapprehension regarding this hospital. There was no intention of using the new infirmary or even the old infirmary, but in time of war any buildings might be commandeered, even the Cathedral or the Town Hall, or the Free Trade Hall, in fact any building that would be suitable for a hospital, but as a matter of fact the general hospital would consist of tents pitched on some suitable site such as the Plattfields. The equipment was already arranged for and negotiations were about to be made with certain firms to supply anything requisite on the shortest notice. Colonel Fry complimented the corps on its efficiency and, with the previous speakers, recognized the soundness of the Territorial scheme. To-day, he said, the defence force was really organized, whereas formerly it was all disorganized. He emphasized the great importance of the medical units on the field of action and mentioned the prospect of divisional training next year on Salisbury Plain.

LEEDS.

ANNUAL DINNER OF PAST AND PRESENT STUDENTS.

THE weather on the occasion of the thirtieth annual dinner of the past and present students of the Leeds School of Medicine was most unpropitious, for Leeds, like many other places in the country, was at that time enshrouded in a dense fog of a peculiarly penetrating character. Happily there was some lessening of its intensity in the latter hours of the afternoon, but it says much for the loyalty and enthusiasm of the men that there was such a good attendance, and every one regarded the gathering, at which Mr. Moynihan took the chair, as one of the most successful that had ever been held. Among the guests was the Lord Mayor, Mr. F. J. Kitson, who is a member of the Board of the Infirmary, and students representative of the sister universities of Manchester and Liverpool.

THE POST-GRADUATE COURSE.

The second term of the post-graduate course at the Leeds Public Dispensary commences on January 19th, when the first of the weekly clinical demonstrations will be given. Of these there will be ten. Of the special short courses announced, there were held during the last term one on diseases of the larynx, and a practical course on clinical pathology, dealing especially with bacteriology. Two special courses will be begun at the opening of the term, namely, on ophthalmology, and the histological and chemical part of the course on clinical pathology. As soon as a sufficient number of applications for admission to the other courses are obtained, these will also be commenced. The special courses announced deal with diseases of the heart, fractures and dislocations, gall stones, methods of physical examination of the abdomen, organic nervous

diseases, and chronic renal disease. Full particulars may be obtained from the Honorary Secretary, Post-graduate Course, Leeds Public Dispensary.

THE LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A special general meeting of this society will be held on the evening of January 22nd to consider a recommendation of the committee that one of the rules should be altered. The rule as at present framed is, "Any duly qualified medical practitioner desirous of becoming a member of the society shall be proposed and seconded at a general or ordinary meeting," etc., and it is recommended that the rule should read, "*Duly qualified medical practitioners, including women*, desirous of becoming members," etc. It might, of course, be argued that the term "qualified medical practitioners" includes women, and, indeed, the action of the association on former occasions would seem to imply that the officials read the rules in this sense, for on two occasions—twenty-three years and some five years ago respectively—women were duly proposed, seconded, and balloted for. At the time, however, when the society was formed and the rules drawn up this question did not arise, and therefore the committee is wise in desiring that the rule should be quite definite. The hope must be expressed that the recommendation of the committee will be ratified by the members, for there does not seem any reason why women, who are now admitted to the ranks of the profession, should be debarred from the advantages of membership of such a society.

LIVERPOOL.

THE COUNTRY HOSPITAL FOR CHILDREN.

THE Country Hospital for Children at Heswall has now been in existence for nine years, and so far as the means at the disposal of the committee have allowed has been doing a highly beneficent work on children who have been the subjects of chronic disease. At an early date a new building, which is nearly completed, will be opened for the reception of patients. It stands on ten acres of land, and consists of an administrative block, containing a committee-room, accommodation for the resident medical officers and the matron, and rooms for a staff of twenty-seven nurses. When the hospital is finished there will be three blocks for patients, but at present only the central block is completed. This block consists of three floors and a basement, each having a corridor measuring 279 ft. by 11 ft., and from it access is gained to the large dining and play rooms, which for the present are fitted as wards. There is a fine operating theatre on the second floor. The hospital is well provided with lifts, all worked by electric power. There is a bed lift, communicating with the first and second floors, and with the theatre; on the ground floor its entrance is so situated that the children from any wards can be immediately taken into the hospital grounds. There are service lifts for food, coal, and stores, the latter extending from the stores receiving room on the ground floor to the store-rooms, which are on the top floor adjacent to the kitchen. The electricity for power and lighting purposes is produced in a special outbuilding near to the laundry, which it supplies. It is proposed to proceed at once with the building of the remaining two blocks. The leading principles kept in view in the foundation and development of the country hospital have been that the institution should be in the country; that it should be conducted on the lines of a hospital in which active medical and surgical treatment could be carried out; and that there should be no time limit, all the patients being retained until recovery or permanent benefit has been established.

NEW DENTAL HOSPITAL.

The Royal Infirmary Medical School, many years before its expansion into the University College, recognized the importance of systematic teaching in dentistry, and as long ago as 1867 appointed the late Mr. Snape lecturer on dental surgery. This was eleven years before the passing of the Dental Act, which made systematic teaching compulsory. The foundation of the present dental hospital in Mount Pleasant was still earlier, its first official year being 1861; its origin, however, was still further back, as it arose before that date through the agency of a dental surgeon, Mr. W. J. Newman, who gave gratuitous dental aid to the poor in his house in Russell Street. In the first year of the existence of the Dental Hospital 696 patients were treated, and in 1907 the number was 25,727. The work is steadily increasing, and the dental school has in recent years come much to the front in the University; it is not surprising, therefore, that the old buildings in Mount Pleasant have for some time been found altogether inadequate.

An admirable site for a new hospital has been found at the corner of Pembroke Place and Boundary Place, on a frequented tram route, and adjacent to the university and the Royal Infirmary. When completed the hospital will be equipped with all the most modern appliances. The cost of this important work is fixed at the modest sum of £10,000 for building and equipment, and of this over £7,500 have already been given or promised. Hospital physicians and all medical practitioners concerned with the health of the working classes will take more than a friendly interest in the progress of this undertaking. Much praise is due to Mr. W. H. Gilmour, the warden of the hospital and the representative of the dental school on the Medical Faculty, for his enthusiastic labour in promoting the scheme which is now about to be taken in hand. Great credit and thanks are also due to Professor Paterson, the Professor of Anatomy, the treasurer of the Dental Hospital, who has cordially supported the movement for a new building, and has worked hard to raise the necessary funds. The Earl of Derby, president of the hospital, has consented to lay the foundation stone of the new building on January 16th. The architect is Mr. G. de C. Fraser.

WALES.

AMBULANCE ASSOCIATION.

THE annual report of the Glamorgan County Centre of the St. John Ambulance Association, just issued by the honorary secretary, Mr. Herbert Lewis of Cardiff, gives some interesting details of the local growth of an excellent movement. In 1907–8, 75 ambulance classes were held in Glamorgan, attended by 2,702 students. These were conducted under the Glamorgan County Council Education Committee, and Government grants were paid on the results. In addition, there were 50 private classes, with 1,200 students, and 1,627 obtained certificates, 326 vouchers, 185 medallions, and 60 secured labels. Since April, 1908, no fewer than 112 candidates have been instructed and examined by this centre. The report concludes:

> The appeal for funds to enable the centre to purchase a motor ambulance car for use in Cardiff and the South Wales coalfield, as far west as Bridgend, has been generously responded to, and a sum of £423 14s. has been promised in donations towards the purchase of the car, and a sum of £109 12s. subscribed towards the maintenance and upkeep, to which Mr. John Cory has contributed £200.

The Cardiff City Council has promised to house and work this car, free of cost, for the first twelve months. The president is Sir W. T. Lewis, the patrons are the Marquis of Bute and the Earl of Plymouth, and the list of vice-presidents and members of the committee, of which the Lord Mayor of Cardiff is chairman, includes a large number of the prominent people connected with the coal, shipping, and other industries. The honorary treasurer is Dr. Thomas Wallace, Newport Road, Cardiff.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE INEBRIATES ACTS.

DR. C. DUNLOP, Inspector for Scotland under the Inebriates Acts, has recently issued his report for 1907.

The numbers admitted into licensed retreats, certified reformatories, and the State reformatory, were each smaller in 1907 than in 1906. This diminution was, it is stated, largely due to a resolution passed early in the year by the managers of the Girgenti Reformatory that they would not admit any fresh cases. The managers of that reformatory, the Town Council of Glasgow, for some years past had been pressing for certain amendments of the Inebriates Acts, and partly because the Government had taken no action on

their recommendations, and partly because they received notice that the Treasury contribution towards the cost of maintenance in their reformatory was to be reduced from 10s. 6d. a week to 7s. a week, they decided to close the institution. The number of direct admissions to the State reformatory was only 8, against 20 in 1906. The total available accommodation for the treatment of the habitual inebriate in Scotland at the commencement of the year in institutions under inspection amounted to 214 beds, there being three licensed retreats with accommodation for 34 men and 32 women, five certified reformatories with accommodation for 10 men and 105 women, and one State reformatory for 9 men and 23 women. At the commencement of the year the total number of patients and inmates was 157, of whom 36 were in retreats, 75 in certified reformatories, 28 in the State reformatory, and 18 temporarily absent from reformatories. During the year 110 were received into licensed retreats, 34 (4 men and 30 women) into certified reformatories, and 8—all women—into the State reformatory. The admissions to retreats were 10 fewer than in the previous year. Admissions to certified reformatories were also 10 fewer, and direct admissions to the State reformatory 12 fewer than in that year. The men admitted to licensed retreats were 21 fewer than in 1906, and those admitted into the State reformatory 7 fewer. The number of women admitted to certified reformatories was the same as in 1906, while those admitted to retreats were 11 more than in that year. Discharges numbered 88; of these 57 were from retreats, 24 from certified reformatories, and 7 from the State reformatory. At the end of the year the retreat patients and reformatory inmates numbered 179; of these 47—39 men and 8 women—were in retreats; 3 men and 71 women in certified reformatories, 10 men and 25 women in the State reformatory, and 23 temporarily absent. The net cost of detention of inmates—extraordinary expenditure excluded—varied from 7s. per inmate per week in Aberdeen Reformatory, to 30s. 8¾d. in the Lanarkshire Reformatory. In Greenock Reformatory it was 9s. 1d., and in Girgenti Reformatory 20s. 6¼d. The average net cost of all inmates in these four certified reformatories amounted to 15s. 5¼d. The inmates' labour produced in Aberdeen Reformatory an average sum of 10s. 4d. per inmate a week, and in Greenock Reformatory 3s. 9d.

Dr. Dunlop states that the result of treatment in the inebriate reformatories in the certified as well as in the State reformatory continued to show about the same amount of success as formerly. In the majority of cases the inmates soon after their discharge relapsed into drunken habits, and as curative or reformative institutions the value of the reformatories had been found to be limited.

Homoeopathy in Glasgow.

Homoeopathy seems to have a struggle for existence in Glasgow. A public meeting was held recently to endeavour to promote the re-establishment of a homoeopathic dispensary. The chairman said that the object of the meeting was to try and extend the benefits of homoeopathic treatment to a much wider circle. Dr. R. Gibson Miller moved a resolution approving the suggestion to establish the dispensary. He remarked that about ten or fifteen years ago there was such an institution, which made out about 54,000 prescriptions annually, but there were not enough doctors to carry on the work. Now, he was glad to say, they had in Glasgow and vicinity five or six homoeopathic doctors willing to go on with the work.

Examination of Nurses by the Local Government Board.

The second examination for the certificates of the Local Government Board of Scotland was held recently in Glasgow. Nineteen candidates presented themselves for the final surgical and medical examination. The examiners were Dr. George Gibson, Edinburgh; Dr. D. J. Macintosh, Western Infirmary, Glasgow; and Dr. Johnston, Superintendent of the Eastern and Western Districts Hospitals, Glasgow. The practical part of the examination was conducted by the matrons of the Western Infirmary and Eastern District Hospital, Glasgow. This is a new departure on the part of the Local Government Board, and is intended for the nurses employed in parochial infirmaries and poorhouses, thereby insuring that the inmates of these institutions will get the benefit of thoroughly trained nurses.

The late President of the Royal College of Physicians of Edinburgh.

There has been placed in the Church of St. John the Evangelist at Edinburgh a memorial brass bearing the simple legend: "In loving memory of Charles E. Underhill, M.B., P.R.C.P.E., born March 8, 1845, departed this life April 24, 1908."

Ireland.

[From our Special Correspondent.]

Irish in the National University.

The senate of the new National University has not yet settled the question of compulsory Irish at the matriculation and at other examinations up to the point of specialization. The new Chancellor, Archbishop Walsh, is said to be opposed to the proposal, but it is believed that the senate is rather evenly divided. The correspondence which has appeared in the local newspapers shows by its language how very angrily the dispute is being carried on, for, while some see in the proposals another proof of a regenerating nation, others see only a proof of inexcusable blundering. The Roman Catholic bishops have not as a body expressed their views in public, but one of them, Dr. Clancy, enters a protest against the tone of the correspondence.

The idea, he says, of branding the senate, of which His Grace the Archbishop of Dublin is president, as "West British," and the university of which he is Chancellor as "a replica of Trinity College," is too absurd for even patient people to bear. Neither is it calculated to win sympathy for the policy of the Gaelic League that a man of Dr. Delany's pre-eminence in every educational work for the last fifty years should be made the victim of vituperative attacks from men whose services in the cause of education of any kind are in inverse ratio to the tone of self-sufficiency with which they write and speak. I fear the correspondence that has been published in connexion with this matter during the last few weeks will not raise the reputation of our people for deliberative discussion.

He holds that to insist on a knowledge of Irish in the case of all candidates from the inception of university work would inflict a serious injustice on a large number of colleges, and would practically exclude from university education, for four or five years, or otherwise drive into Trinity College, many of their best, most brilliant, and most promising young men and young women. He therefore advocated that, should a knowledge of Irish be made essential for matriculation, as he hoped it would, the colleges of the country should be allowed reasonable time to prepare for such an ordeal; and he suggested a period of four or five years as a minimum for this purpose.

And since, after the lapse of this period, it would set a premium on national apostasy, if Catholics, who are unwilling to face the drudgery of studying Irish, could gain easier admission to Trinity College than to the National University, I would advocate, in the second place, that the Gaelic League should bring all its influence during the next four or five years to bear upon the authorities of Trinity College with a view to have them adopt a similar rule in reference to the Dublin University.

The Gaelic League will have a hard task to convert the board of Trinity College to such action; but the fact that a suggestion of this sort should be made by a man who knows conditions as they are in Ireland shows how serious the question is.

The Health of Belfast.

The Belfast Health Commission appointed by the Local Government Board gave in its report about the middle of 1908. A joint report drawn up by three committees of the City Council in answer to the Commission's report was issued a few months later; in it the Citizens' Health Committee was pilloried as asking for and procuring an investigation which was expensive and did no good. The Citizens' Health Committee has now issued a rejoinder to the combined committees' report. The various questions which were submitted to Mr. Bryce, the ex-Chief Secretary for Ireland, and given as a basis and reason for inquiry, are taken in order, and in a parallel column are given the answers of the Commission. Every one has thus an opportunity of seeing at a glance the problems which appealed to the Citizens' Health Committee and the answers or solutions of the Commission. The important questions of typhoid fever, tuberculosis, the death-rate and

the population of Belfast, the measures taken by the health authorities to localize disease, the report of a previous inquiry, are also considered pretty fully. Finally, the conclusion is arrived at that the demand for an inquiry was perfectly legitimate, and that considerably more energy has been thrown into the working of the Health Department since the Commission sat, and that if the Department will seriously grapple with these questions it will find no more cordial supporters than the Citizens' Health Committee; the unwritten but evidently suggested inference is that if no serious attempt be made the vigorous attack will be continued till Belfast takes her place with other large towns in the advance of public hygiene.

Natal.

[FROM OUR SPECIAL CORRESPONDENT.]

COOLIE IMMIGRANTS.

A GOVERNMENT commission of inquiry has been appointed to examine into the question of indentured coolie labour in the Colony. The terms of reference amongst other clauses include the inquiring into, and advising upon, the medical supervision of indentured immigrants and the control by Government of medical officers employed in this work. The seven members of the Commission include five members of the Natal Legislature.

ANKYLOSTOMIASIS.

Ankylostomiasis, which is rife on several of the sugar estates, is attracting considerable attention and causing some alarm. The latrine system is being perfected in all places employing Indians, and in all infected centres of industry regular hospital treatment has been instituted, examination of new arrivals being carefully conducted. Precautions are also being taken to guard against overseas infection. Ankylostomiasis has now attacked Europeans, and the disease threatens to be a serious matter for the Colony.

Canada.

[FROM OUR SPECIAL CORRESPONDENT.]

TUBERCULOSIS EXHIBITION AND LECTURES.

THE Montreal League for the Prevention of Tuberculosis, which was practically organized by Professor Adami some five years ago, has been doing quiet but steady work and gaining strength day by day; but the most important step in its history was taken when it was determined to educate the public by means of an exhibition, which was held in Montreal from November 17th to November 28th, 1908.

A special effort was made to reach the children, and lectures and demonstrations were arranged for their benefit. The school authorities co-operated with the committee, with the result that in one morning alone fifteen hundred were present.

It is estimated that between 4,000 and 5,000 citizens of Montreal daily availed themselves of the opportunity of becoming acquainted with the progress made in the fight against tuberculosis, as 55,000 attended in all. Speakers from Paris, New York, and Toronto, as well as from Montreal itself, delivered lectures in French, English, and Yiddish; and a large staff of nurses from the various city hospitals gave demonstrations in cooking, care of infants, care of milk, etc. The exhibition was formally opened on November 18th by His Excellency Earl Grey.

Dr. Herman Biggs (head of the Board of Health, New York) gave a most interesting history of the fight against tuberculosis in New York. In 1887 Dr. Biggs brought before the New York Board of Health a proposal for the scientific treatment of consumption. It was referred by the board to a committee of medical men, who reported that the time was not ripe for the introduction of such a measure. Again in 1893 Dr. Biggs brought up the matter, and finally a resolution was passed by the board declaring tuberculosis to be an infectious disease, and instituting certain measures for its prevention. There were, in the first place, education of the poor; secondly, registration of cases, especially those in institutions; thirdly, visiting cases into the homes; fourthly, inspection of buildings vacated by tuberculous patients; and, lastly, the condemnation of buildings under order of the board in special cases. Registration of private patients was not at first made compulsory, as it was realized that there was a strong feeling against such registration. A few years later, however, the requirement of notification was extended to all physicians; and then trouble began. The doctors as a whole were opposed to the innovation, and fought the board even to the Legislature, but at the present time they were working in harmony with the Board of Health in reporting these cases. New York was an exceptionally difficult city to govern, as it contained sections more densely populated than any other place in the world; there were parts of the city where the population was 800 to 1,000 to the acre. What this meant might be realized when it was remembered that Whitechapel contained but 350 to 400 to the acre. However, their inhabitants were almost always foreigners and of the lowest classes, each speaking its own language—Greek, Slav, Czech, or Chinese—so that many of the circulars were printed in nine different tongues. One publication in the educational crusade was a catechism for school children; of this 700,000 copies were distributed this autumn. Lectures were given before social settlements and labour organizations, illustrated with stereopticon views. Literature of all kinds was widely disseminated, and the press was freely used for the purpose of popularizing knowledge of the subject. The second main feature of the campaign in New York was the notification of cases. This had been opposed on the ground that the patients were branded as lepers and placed outside of all society. This argument he considered to be nonsense. The notification was not public; it was for the Board of Health only, and if the case was in charge of a qualified physician who would direct proper precautions to be taken, the board left the case in his hands, and limited inquiries to every six months, to see how the patient was progressing, and whether the physician was prepared to continue his oversight. At the present time it was estimated that 95 per cent. of the cases were reported, or about 40,000 cases, of which some 30,000 were in the tenement district. Free examination of sputum was another feature, and whereas when this was first introduced but 500 specimens were examined, last year there were 27,000. House to house visitation by trained nurses was a means of keeping track of the spread of the disease. Eleven clinics were carried on in different parts of the city, and these were used for the distribution of eggs and milk, as well as medicines. Dr. Biggs thought that the construction of hospitals for advanced cases was the most important part of the work of the Board of Health, and that insubordinate cases should be detained by force. He thought that a few examples would soon put an end to the necessity of forcible removal. When a building was vacated by a tuberculous patient it was placarded until its owner had disinfected it and had done the necessary painting or kalsomining. Dr. Biggs closed his address by wishing every success to the movement in Montreal.

Dr. Dagenais, in moving a vote of thanks to Dr. Biggs, drew attention to the work that was being done in Montreal, and stated that it was hampered by lack of funds.

Dr. Hodgetts, of the Ontario Provincial Board of Health, in seconding the resolution, declared the need of Federal action to meet the evil, and gave a brief outline of a plan for the division of the expense.

Sir George Drummond, Dr. Yates, Dr. Adami, and Dr. Lachapelle spoke during the afternoon session.

The exhibition was well advertised, the press devoting several columns daily to a report of the proceedings, and the results were well shown in the numbers which attended. The exhibition itself was of the most practical nature, illustrating open tents, ventilation of rooms of all kinds, methods of sanitation and disinfection, the physiology of breathing, and many other similar matters. One thing, however, was noticeable, which is so often absent under such conditions—namely, adequate instruction. There was always a splendid staff of trained and efficient men and women in attendance who could and would explain things. Nothing was left undone to demonstrate the meaning of every article and point out the value of

every exhibit. Nothing was left to chance. The gospel of fresh air, sunshine, cleanliness, and good food was preached from every side, and it is impossible to think that an impression was not made.

The lantern lectures were not only scientific and accurate, but they were popular and most interesting. The children listened with attention, than which no better test could have been given of the value of these addresses. The demonstrations were carried out in detail before an appreciative audience every day, and talks, such as were given by Miss McNaughton and Mrs. Newcombe, were received with great enthusiasm.

The work was carried on in English and French, so that the whole of the city was interested in the exhibition at the same time, while one of the last lectures was in Yiddish, thus including one of the most important and populous sections of the city.

It need hardly be said that the committee has been delighted with the outcome of the venture and with the support they have had, not only from the medical profession but from the general public.

The results cannot be over-estimated, for although they may not be seen for some time to come, yet the educational value, more especially to the children, will be evident in the homes of those who as yet have not been impressed by the brilliant prospects for success from following methods thus popularized.

The results of the prize competition for the essays on tuberculosis by a scholar in any school in Montreal have not yet been published, but the fact that hundreds of papers have been received goes to show that the aim of the committee has not been amiss.

It is to be hoped that a similar exhibition will be attempted in other cities of the Dominion and that a like success may follow.

Special Correspondence.

PARIS.

Disturbances in the Latin Quarter.—Professor Osler.

VERY serious disturbances occurred last week in the Quartier Latin, beginning on Monday morning, when the examining board, under the presidency of Professor Bouchard, assembled to hold the first examination of candidates for the certificate of admissibility to the competition for the posts of *professeur agrégé* in the different medical faculties in France. This new certificate of higher medical studies met with great opposition, as it tended to create a grade of qualified men above the ordinary doctor of medicine. At present all qualified men in France hold the State diploma of doctor of medicine, and the teaching staff in the faculties of medicine is selected as vacancies occur by competitive examination. The new certificate was intended to be given to qualified men who should pass a higher qualifying examination, the successful candidates being able to present themselves for the post of *professeur agrégé* as vacancies occurred in the subjects in which they might have specialized. Protests against this proposed creation of a higher class of practitioners had been presented by the two last Congrès des Praticiens, the petition being signed by no less than 12,000 medical men. The Medical Students' Association had also presented a petition, but both had remained without effect. Though 123 candidates presented themselves for examination, the majority as a protest did not sign the paper as being present. In the meanwhile an angry crowd collected outside the Faculty of Medicine, a large majority of those present being practitioners of 30 or 40 years of age. After hissing and booing, the crowd burst into the Faculty, and after doing much damage the examination was postponed till Thursday morning at 7.15 a.m. Meetings of protest were held on Tuesday and Wednesday, and each day the Faculty was guarded by police. On Thursday morning, in anticipation of fresh disturbances, strong bodies of police and a company of Republican Guards were posted as early as 6 a.m. in and around the Faculty of Medicine. At 8 a.m. the paper was set, but at 11.30 out of 123 candidates only 18 sent in any papers. Of the remainder some went away, but the majority stayed in the examination room, sat on the tables, lit cigarettes, or played cards. Before 11 a.m. the crowd had reached sufficient proportions to attempt to tackle the cordons of police across the streets which barred all access to the Faculty of Medicine, and soon after there was a pitched battle, the students throwing eggs, potatoes, ink-pots, etc.; the windows of the Faculty were broken, but the police were reinforced and standing six deep withstood the charge of the students. In the afternoon, however, matters became much more serious, the crowd had grown much larger and the Director of the Police summoned the mounted Republican Guards, who charged several times on the Boulevard St. Germain. Though driven away from the neighbourhood of the Faculty of Medicine a band of students managed to penetrate into the Senate. A great number of students and police were injured. On Christmas Day M. Clemenceau, the Premier, who is a medical man, received M. Julien, the President of the Students' Association, and in the presence of M. Lepine, Prefect of Police, heard the accounts of the rioting. M. Julien protested also against the presence of detectives and police within the precincts of the Faculty of Medecine. M. Lepine said they had been sent on the written application of Professor Bouchard. M. Clemenceau disapproved of this, and gave a written order to M. Lepine that this should never occur again. M. Clemenceau received a written statement of the objections to the new system of examinations, and the question will be considered at a Cabinet Council. In the meanwhile the examinations are postponed. The Faculty has, however, closed the dissecting-rooms to first and second year students till March 1st, which means a loss of three months to all concerned. The Latin Quarter is now again quiet.

Professor William Osler, who read a paper on endocarditis before the society, has been made a corresponding member of the Société Médicale des Hôpitaux of Paris.

EGYPT.

The Cairo School of Medicine.

HE Cairo School of Medicine makes steady progress in popularity amongst the rising generation of natives. At the commencement of the winter session in October, 1908, an unusually large number of young men applied for permission to enter the school; 50 were admitted, that number being all that the school can accommodate, although many more applied; there were now 240 students enrolled. With a view to training some past students to become efficient teachers in the school two of the laboratory assistants have recently been sent to England for further post-graduate study, and two more will shortly follow, their places being temporarily filled by young men recently qualified, who will in time also be sent to England for further study. The examinations for first and second years men commenced on December 19th, 1908, and the final will be held on January 9th. Dr. Norman Moore of St. Bartholomew's Hospital has been appointed by the Conjoint Board in England to represent it this year as its delegate and supervisor of these examinations.

Correspondence.

THE CHARTER AND THE REFERENDUM.

SIR,—I see from the announcement in the JOURNAL of last week that a petition for a Charter has been lodged at the Privy Council. I think it well, therefore, to say that such petition has not received the signatures of the President, Past-President, or President-elect.

For my part I was anxious that the Branches should follow the example of the South-Western Branch and take a postal Referendum of the members, so that their wishes should be clearly expressed.

I am still desirous that other Branches should take the matter up.—I am, etc.,

SIMEON SNELL,
President, British Medical Association.

Sheffield, Dec. 30th, 1908.

SIR,—The following letter, with an accompanying post-card, was sent to every member of the Branch, and we now append the replies received to date:

British Medical Association,
Glasgow and West of Scotland Branch,
Glasgow, December 19th, 1908.

Dear Sir,—At a meeting of the Branch on the 16th inst., specially convened on a requisition from the North-Western Division, to consider the restrictions upon the use of the Referendum in the Charter as it now stands, the Secretaries were instructed to take a postal vote of the members of the Branch to ascertain whether it was their opinion that a Referendum should be taken (1) on the requisition of half the members of the Central Council present and voting at the meeting at which the question came up, and (2) that it should then be by letter addressed to every member of the Association.

We were instructed to add a few words of explanation. To members who have perused the numbers of the JOURNAL for October 31st, November 14th, 21st, 28th, December 5th and 12th, or who can refer to them, no explanation is necessary, as the questions at issue are fully discussed from every point of view in the correspondence columns of these issues.

The position is, shortly, as follows:

Under the Charter as finally amended at the Sheffield meeting, a two-thirds majority of the Council will be required to put the Referendum (or appeal to the membership of the Association) into operation. It has been pointed out that this means that, as one-third of the Council is to be elected by the Representative Body, all the other members of the Council would have to be unanimous, and all present, in order to carry a Referendum to the membership of the Association. Further, in the event of a Referendum being taken, all the members unable to attend a Divisional meeting would be disfranchised, no postal vote being provided for. It appears to be admitted that, as matters at present stand, about 90 per cent. of the members would be disfranchised under this arrangement.

We enclose herewith a post-card upon which we have respectfully to request that you will register your vote by a simple "Yes" or "No" in reply to each of the two questions submitted. We have also to urge that you will be so good as to return the post-card not later than Wednesday, 23rd curt.

Yours faithfully,
JAS. GRANT ANDREW,
WM. D. MACFARLANE, JR., Hon. Secs.

On the post-card:

1. Are you of opinion that a Referendum should be taken on a requisition of half the members of the Central Council present and voting at the meeting at which the question comes up?
2. Are you of opinion that the Referendum should be taken by letter addressed to every member of the Association?

An affirmative reply was given to both questions in 180 instances.

A negative reply to the first question and an affirmative to the second were given in 72 instances.

An affirmative answer to the first question and a negative to the second were given in 2 instances.

An affirmative reply to the second question alone was given in 19 instances.

A negative reply to both questions was given in 7 instances.

To the first question, therefore, there replied:

In the negative	79
In the affirmative...	182

So that there was, of those voting, a majority of 103 in favour of a Referendum being taken on the requisition of half the members of the Central Council present and voting at the meeting at which the question comes up; and to the second question there replied:

In the negative	9
In the affirmative...	271

—a majority of 262 in favour of the opinion that a Referendum should be by letter addressed to every member of the Association. There is membership in the Branch of 687; 280 members voted, or 40.7 per cent.—We are, etc.,

JAS. GRANT ANDREW,
WM. D. MACFARLANE, JR.,
December 26th, 1908. Hon. Secs.

SIR,—The members of the Midland Branch have had a circular sent to them somewhat similar to that forwarded to the members of the South-Western Branch, and have been asked to reply to the question:

Do you approve of the Branch Council taking, in conjunction with other Branches, the necessary steps to lay before the Privy Council their view that a Referendum should be taken on the requisition of half the Council, and then by letter addressed to every member of Association?

There are 535 members of the Branch. The result of the voting is as follows:

Approvals...	219
Disapprovals	7
Undecided	1
Away	1

—I am, etc.,

ROBERT SEVESTRE,
Leicester, Dec. 21st, 1908. Honorary Secretary, Midland Branch.

SIR,—The postal vote which has been taken of the Midland Branch I have had the opportunity of examining in detail, and, as it is desirable to throw all possible light on the various methods of taking a Referendum, I have studied the answers to this experimental vote carefully.

To begin with, there are 535 members of the Branch, and this list has been dissected to ascertain how many members live in county towns (where Divisional meetings are held) and how many live in country places. I find that 228 live in county towns, and these could register their vote personally, without any difficulty whatever, provided the time to do so was somewhat elastic. Against this number I find there are 307 members living in country districts, and to these it is a matter of sacrificing considerable time (to say nothing of some expense) in order to have their desires made known to the Association.

The recent poll only included 227 replies in all—that is, about 40 per cent. of the membership; but it must be granted that this is a great increase on the percentage who recorded the vote personally and under the stimulating influence of a Referendum!

Of these 227, county town members were 93, while the number from country places was 134. This demonstrates clearly, I take it, that the men are willing to take a share in responsible decisions provided they have the opportunity. It would be interesting to have the figures of other Branch votes worked out on similar lines.

I feel very strongly that the policy of the Association should be to get the men to become members, and, once having got them, to educate them to take an active interest in its affairs; but this must be a gradual process, for many of the questions are exceedingly difficult of solution, and the busy medical man has not much time to devote to the study of highly contentious issues.

I trust sincerely that no harm may result from the openly advocated policy of "shedding the leaves," and I should like to remind the author of the botanical simile that the leaves perform a vital function in the life-history of the tree—not more vital, however, than does a large and increasing membership of our Association.—I am, etc.,

Leicester, Dec. 23rd, 1908. ASTLEY V. CLARKE.

SIR,—I beg to hand you a summary of the returns of the voting up to this date, which I have received from the six Branches that have taken postal Referenda:

	Approving Resolution of S.W. Branch.	Disapproving Resolution of S.W. Branch.	Neutral.	Strength of Branch.
Yorkshire	378	9	2	884
South-Western	346	3	4	457
Midland	218	7	1	535
Edinburgh	214		—	413
Oxford	180	3	1	285
Dorset and West Hants	116	2	1	215
	1,452	26	9	2,789

These are not to be regarded as final, since in some cases I am informed that votes are still coming in. It will, however, be observed that *over 50 per cent. of members of these Branches have signified their approval of our procedure; whilst less than 1 per cent. have signified disapproval.*—I am, etc.,

RUSSELL COOMBE,
Exeter, Dec. 23th, 1908. Hon. Sec. South-Western Branch.

SIR,—After several years of hard work by many of our members; after innumerable meetings of committees, Divisions, Branches, councils, and Representatives; after endless discussions on the subject and much correspondence, often too acrimonious and too personal, in our JOURNAL, we have at last, with the kind help of the authorities, arrived at a form of Charter which, in the main, satisfies all of us, and which, we are told, is acceptable to the officers of the Crown. This draft Charter has been definitely passed by our Representative Meeting, and subsequently twice confirmed by our Council. And yet now, at the eleventh hour, when, I believe, the application for the Charter has actually been sent in, an attempt is being made from within our Association itself to wreck the scheme, to throw away all this work in the past, and to squander our money on a contest for a Charter which ought to have been unopposed.

And for what is this urgent opposition raised? The only objection put forward is in connexion with the Referendum. The two points in dispute are: (*a*) As to the majority required in the Council, before a Referendum can be taken, and (*b*) as to the manner in which this Referendum shall be taken. Now, is it really worth while, for the sake of these two simple points, to make ourselves a laughing-stock, as an Association that will not abide by the rules of its own making?

It stands to reason that in an association with many thousands of members, it is impossible that every individual should be satisfied with every detail of a complicated document like the draft Charter. There may be many who think that a bare majority of even a small meeting of the Council should be sufficient to call for a Referendum. But we must remember that this Referendum will be attended by considerable expense and delay, and that the Ordinance as it now stands only lays upon the Council the same limitation as is placed on the Representative Meeting when voting on matters of importance. There may also be many who feel that a Referendum is not satisfactory where only those votes are counted which are recorded at a Divisional meeting, and that something in the form of a "postal" vote would be better. But this method of taking a Referendum by votes at a Divisional meeting is not an innovation: it is the existing method under which the work of the Association has been done for years, the object being that no vote should be taken without the question having been fairly discussed. The need for the alteration of this cannot, therefore, be a matter of pressing urgency.

Whatever views we may hold on these disputed points, one thing is certain, *the time for making alterations is not now*. In accordance with the Articles of our Association at present in force, they might have been revised at any time up to the meeting of the Council following the Representative Meeting at Sheffield, or they may be amended at or after the next Representative Meeting. But any attempt to do so now is not in accordance with our Articles, and is therefore truly unconstitutional.

I believe that this unbusinesslike resistance to the legitimate acts of our governing bodies has arisen from the misconception that these points can never be altered if the Charter is granted now. This is quite untrue. Our Charter will consist of three sections

1. The Charter proper, which, when once granted, can only be altered by act of the King or Parliament.
2. The Ordinances, which can be altered at any time with the consent of the Privy Council, and we are advised that the Privy Council never make any difficulty when applied to by the constituted authority.
3. The By-laws, which may be altered by ourselves without application to any outside authority.

Now, the disputed points come in the Ordinances, so there would be no difficulty in their amendment at any future time.

Do let us sink our differences for the time, and appear to the world as a sane and united body—at any rate, till the Charter has been granted. After that let us fight out the question amongst ourselves, without inviting the world to watch us squabble.—I am, etc.,

Harrow, Dec. 18th, 1908. ALFRED H. WILLIAMS.

SIR,—Under the Charter all power is given to the Representative Body, and the resolutions adopted unanimously at Dr. Davy's conference would, if carried out, have taken away any cause for complaint that the Representatives do not represent the views of the great body of members.

1. *On the Point of New Departures of Policy.*—That a decision of the Representative Body to adopt for the furtherance of the objects of the Association any of the means specified in Clause 2 (2) of the Charter not previously adopted shall require confirmation by another Representative Meeting. If so confirmed the proposal will then come before the Council, which may take a Referendum. This would prevent "the promotion of the candidature of any member of the Association for Parliament or for any British (not *colonial*) legislative assembly" being adopted without full consideration. (The recent decision in the High Court will doubtless prevent this being included in the objects of our trades union.)

2. *On the Taking of a Referendum.*—That a Referendum shall be taken on the requisition of half the Council, and shall be by means of voting papers sent to every individual member of the Association. This would remedy the present unsatisfactory state of things, and would give every member a chance of recording his vote without the loss of time and expense incurred in attending Divisional meetings.

It is of course quite possible that even then a large number of Dr. Fothergill's "leaves" would not take the trouble to return the post-cards, but recent experience shows that a clear majority would record their votes, and those who did not take the trouble could not complain, as every one would have an equal chance.

3. *On the Election of Representatives of Divisions.*—That nominations should be received by a certain date, and, in case of a contest, that the election *shall* be by voting papers sent to each member of the Division. This, to my mind, is the most important of all, and would make the Representatives truly representative. Nomination would lead to competition. At a meeting when one man is proposed it is very invidious to get up and propose another, however much one felt the first man unsuitable; but no one would mind sending in a nomination, and by means of voting papers every one would get an equal chance, and it would be the fault of the members if they did not choose the best man.

It is true that this is to be optional under the Charter, but it should be compulsory, and reference to the SUPPLEMENT of August 2nd, 1908, will show that the very men who threw out this amendment were afraid to trust themselves to the suffrages of their constituents, and will take care the present system is continued at any rate in their Divisions. The members present at Dr. Davy's conference fully recognized the unsatisfactory condition now existing, and instances were given.

One gentleman stated that a meeting of the Division was called to elect a Representative. He attended and no one turned up, and he had to go out and get a couple of men to come in and form a meeting, one to propose and the other to second his re-election; and it is whispered that even in that model Division of all Divisions, Wandsworth Common, the attendance is not very great, except at feeding times, and that our great lawgiver does not represent many voters.

It is an undoubted fact that very few Divisions take the trouble to instruct their Representatives, and such a flood of matter has been poured out at head quarters that it has been impossible to go through half of the questions referred, and the custom, even in active Divisions, has been to consider one or two matters and then leave the rest to the discretion of the Representative, although few, I hope, adopt the methods of the Channel Islands Division which the Representative finds so satisfactory.

Now the Medical Secretary's office is fully staffed it is to be hoped that matters referred to the Divisions may come down more frequently and not all in a batch as heretofore.

I fear very few read the SUPPLEMENT of August 1st, 1908, and would advise every one to read it and compare with the letters in the JOURNAL; it will then be seen that the very men who now state it will be easy to amend the Ordinances as desired after the Charter is granted, resisted at Sheffield the introduction of the resolutions into the Ordinances on the ground that once introduced it would be almost impossible to vary or alter if desired.

In conclusion, I would state that in my opinion the peace of the Association depends greatly on the adoption of

nomination and election by voting papers of all Representatives compulsorily, and then there will be no reason to fear that the twelve Representatives on the Council elected by the Representatives will act as a body hostile to the members of Council elected by the Branches, because these twelve men are to be elected by single-member constituencies, consisting of one or more Branches grouped for that special purpose, by the Representatives of the Divisions included in the area thereof, and not by the Representatives as a body, so that if the Representatives themselves are chosen as the members of the Council elected by the Branch are now, they will be equally to be relied on as voicing the wishes of the members.

I hope steps may be taken to hold a conference in London, and that the South-Western Branch will see this is carried out shortly.—I am, etc.,

Wimborne, Dec. 21st, 1908. C. H. W. PARKINSON.

MINISTRIES OF HEALING.

SIR,—Your carefully considered leading article in the JOURNAL of November 28th, 1908, on the above remarkable extension of medical practice suggests that the question of the systematic application of psychic force as a remedial agent is at least worthy of careful consideration. For several years while Physician to the Glasgow Royal Infirmary I made use of it in the wards under my charge. This was before I heard of the existence of Mrs. Eddy and her ways. I have recorded the results of my experience in the volume of the *Glasgow Hospital Reports* for 1889, and I had previously brought the subject before the International Medical Congress in Moscow.

I think I may best indicate the class of cases in which this method of treatment was employed, the procedure followed, and the results of the practice, by a quotation from the former of these papers:

> The method of procedure is as follows: Sitting down opposite the patient, if in bed, or standing opposite her—for in most, but by no means all, cases it is a woman—if on foot, I require her to look steadily at my eyes. This frequently causes a difficulty at first, as there is a strong disposition in such cases for the patient to look down or aside, but on speaking resolutely she eventually complies with my request. Then continuing in a firm tone of voice and decided manner, I address her somewhat in the following terms: "You understand that these seizures, if subject to spasmodic or other form of attack, must stop." This I repeat, often modifying the remark, till I get the patient to say, "Yes, sir." Daily or every second day, at gradually increasing intervals, this formula is gone over, and even after the patients have left the infirmary I have required them to return once a week for several weeks, so as to maintain the controlling and fortifying influence on the mind and brain.
>
> The results in most cases have been immediately successful, and have been observed by medical practitioners as well as students. It is not, however, sufficiently powerful in its action to cope with the more severe forms of neurotic disorder, such as those recorded in the early part of this paper. Its proper sphere of usefulness is in the slighter forms of derangement of the nervous system.

In another part of the same paper I mention that in one case of chronic melancholia the daily practice of psychic impressions by myself in the way described, so far as I could judge, clearly assisted ordinary general treatment in inducing recovery. I also state that as far back as 1871 I tried the effect of strong mental impression in insanity, and recorded my experience in the BRITISH MEDICAL JOURNAL for that year.

It is to be observed that throughout this letter I have used the words "psychic impression" or "psychic force" to designate this therapeutic measure. The first of these terms is preferable as it raises no question as to the nature of the action. *Suggestion* is much too mild in its significance; it seems to leave a choice to the patient. On the contrary, he or she is subjected to a dominating, compelling force, that of the operator's will, which produces a profound impression on the mind of the recipient. Doubtless, too, there is a corresponding cerebral change, probably a partial or even complete restoration to the normal condition.

I close these remarks by stating my conviction that both in hospital and private practice this psychic agent should be employed in suitable cases as an addition to ordinary medicinal and hygienic treatment. But besides, as you have said in the article referred to, the help which religious faith and spiritual teaching can give should be cordially welcomed.—I am, etc.,

Glasgow, Dec. 7th. ALEXANDER ROBERTSON.

LACTIC ACID BACILLI.

SIR,—Dr. R. W. Allen's paper on lactic acid bacilli appeared in the BRITISH MEDICAL JOURNAL of November 28th at the moment when Major G. Dansey Browning and I were completing an inquiry into certain other aspects of the lactic acid bacillus treatment.

Our work leads us to believe that the liquid commercial preparations alone contain pure cultures of Bulgarian lactic acid bacilli, and that these are temporarily in a state of low vitality—the so-called *vie ralentie*—when grown at atmospheric temperature. Solid preparations, on the contrary, are invariably contaminated with spore-bearing and other organisms, which more or less rapidly overgrow the Bulgarian bacillus when cultivated at 37° C. We fully realize the danger of incubating possibly contaminated milk, despite the presence of added living lactic acid bacilli; and we think that this danger is necessarily much greater when non-vigorous bacterial growths are made use of.

We offer the following suggestion for administering lactic acid bacilli as a possible solution of this difficult question:

> Obtain the Bulgarian bacillus in pure cultivation on a liquid medium (that is, a liquid commercial preparation).[1] Incubate this preparation for twenty-four hours, and then add it to the vehicle selected for administration. Of these, milk which has been boiled on water bath for an hour, sterilized whey, or malt extract solution appear to be the most suitable.
>
> In the absence of an incubator, the unopened liquid preparation may be kept in a Thermos flask filled with water at 40°-37° C.

Unfortunately the liquid preparations remain active only for a short time, and young cultures can only be employed. In older cultures the amount of acid production is so considerable that the Bulgarian bacilli themselves are killed off. If, however, particles of solid calcium carbonate be added to the cultures containing the young bacilli no excessive acidity is developed, and the culture will remain active for a considerable period.—I am, etc.,

F. G. BUSHNELL, M.D.,
December 26th, 1908. Sussex County Hospital, Brighton.

THE USE AND ABUSE OF THE CURETTE.

SIR,—Dr. Donald is right in his conjecture as to why I did not mention his name. I did not wish to attack him, but only what I conceive to be his erroneous opinions. And I did not criticize his treatment of individual cases. I am quite willing to believe that among the group of cases that he calls "endometritis in virgins," there may have been some of genuine dysmenorrhoea which were cured by the dilatation which went with the scraping and the packing; and also that in some of them there may have been adenomatous growths which it was good treatment to scrape away.

But as to the main issue, I am impenitent. Dr. Donald describes what he terms a "clinical type": young women with pain, worse when they menstruate, and leucorrhoea. In about half, he says, menstruation is increased. A symptom which is absent in half the cases can hardly be called typical. This clinical type he thinks is due to endometritis. The late Dr. Graily Hewitt used to take young women suffering from similar symptoms into a hospital or nursing home; he gave them rest, food, and sleep; he put a contorted bit of vulcanite into the vagina, and sent them home greatly improved in health. He thought that the illness was from anteflexion, and that the improvement resulted from the bit of vulcanite in the vagina. A more recent eminent gynaecologist used to bewilder certain candidates at the examination hall by asking them questions about "chronic ovaritis." Many of them had never seen the disease diagnosed; and they were told by the examiner that it was the commonest disease to which women were subject. For this same clinical type ovaries have been removed because they were thought to be "sclero-cystic," or "cirrhotic." On this question I expressed my views at the meeting of the

[1] The liquid preparations examined by us were obtained from Messrs. Oppenheimer and Son, London, and from Messrs. Millet et Veillard, Paris.

British Medical Association at Oxford in 1904. I grant that in a few cases of this clinical type there may be some local disease requiring local treatment; but most cases of chronic pelvic pain in virgins are due to neurasthenia, and do not want either curetting, or pessaries, or removal of the ovaries.

Dr. Donald says that the leucorrhoea is uterine and not vaginal, because "the discharge was seen to be coming from the cervical canal." No doubt the cervical glands secrete; but does *all* the discharge come from the uterus? I think every general practitioner of experience knows that an astringent vaginal douche will almost always lessen or abolish leucorrhoea in a virgin, which is to me evidence that the bulk of leucorrhoeal discharge comes from the vagina and not from the uterus.

Dr. Donald regards as physical signs of, or causes of, disease, smallness of the cervix and anteflexion. I suggest that he should ask the pathologist of the Manchester Royal Infirmary to look for specimens of disease produced by smallness of the cervix or acute anteflexion. Acute anteflexion is present in many nulliparae, and there are specimens in many museums. In all the specimens the canal is a gentle curve, with no more obstruction than there is in a bend of a river. Dr. Donald might also direct the attention of the pathologist to Dr. Bossi's "cochleate uterus," and ask him to find one.

Dr. Donald objects to the comparison of the cervix uteri with the lobule of the ear, because one is an unnecessary appendage, and the other the orifice of a secreting organ. The point of the comparison is that one is visible to everybody, while the other is only looked at in order to find some disease. But since he is not satisfied I will give him another. Tennyson describes one of his heroines as having a nose "tip-tilted like the petal of a flower." Between this and the aquiline beak of the "Iron Duke" there is a difference greater than is commonly seen between the cervices of different virgins, but I have never heard rhinologists point out either shape as evidence of disease. I do not attach importance to slight changes in the size of the uterus. My own senses are not acute enough to make me certain of small changes in size felt through so thick an intermediate structure as the abdominal wall. It was by signs such as these that Apostoli persuaded himself that by electricity he produced absorption of fibroids, a thing that nowadays scarcely any one credits.

The remark about retroversion which Dr. Donald notices was only incidental, and not the main subject of my lecture. Retroversion is associated with prolapse, and therefore with pain, in much more than one case in ten, but in most of these it matters not how the uterus is lying. I have by numerical analysis of cases come to the conclusion that in about one case in ten a patient with retroversion of the uterus has pain that she would not have had if the uterus had not been retroverted. My statement as to the obstruction of the return of blood from the uterus by pressure of sharp utero-sacral ligaments rests on *post-mortem* evidence; a uterus has been seen with the marks of this pressure on it. The details on which these general statements are founded are given in papers published in the *Transactions of the Obstetrical Society of London*, vols. xxiv and xxxii.

Dr. Donald thinks there is a steady turn in the practice of gynaecologists, and a growing disinclination to treat "these patients" with pessaries. Since I began this letter I have been into two of the principal surgical instrument makers' shops in the West End of London and asked if there was any diminution in the sale of pessaries. Both said there was not; and one thought the tendency was in the opposite direction. The request that I should lecture on the use *and abuse* of the curette does not suggest a trend in favour of more frequent scraping.

I say nothing about dysmenorrhoea at present. I may at a future time do so.

Dr. Donald says that his views "have suffered considerable misrepresentation." If I am in any way responsible for this, I am sorry. But I am still unconvinced that endometritis exists in virgins, apart from new growths or accidental infection. I think that scraping the uterus to relieve pelvic pain in virgins is a mistake, and that the repetition of scraping which has failed to do good deserves to be called an "abuse."—I am, etc.,

London, W., Dec. 23rd, 1908. G. E. HERMAN.

THE APPLICATION OF MENDELIAN RULES TO HUMAN INHERITANCE.

SIR,—I agree entirely with several statements made by Professor Karl Pearson in his criticism in your issue of December 5th, 1908, p. 1720, of my address on "Heredity," but there are some statements from which I dissent.

He says: "It seems to me very dangerous in the present state of our knowledge to accept any sweeping application of Mendelism." Some may infer from this that I have been guilty of such a fault; but, on the same page which contains the remark to which the professor specially objects, it will be found that I said: "We must, however, acknowledge that Mendelian laws seem to be inapplicable in certain cases of inherited disease and abnormalities"; therefore, I plead "not guilty."

As to Nettleship's chart of the night-blind family, it will be well to examine it further. The figures I gave were quoted from Nettleship's paper (page 8). I cannot quite see how Mr. Nettleship gets the 255. I find there are 274 individuals in the disease-bearing branches if we stop at, and include, the last abnormal (+ the brothers and sisters) in each line of descent. These "last abnormals" are conspicuously numerous in this family tree, and one would like to know the reason for this. Possibly it is analogous to some such coupling of factors as seems to cause the 9.3.3.1. ratio to be modified to 9.3.4. or 9.7.; or may it be that, just as a yellow pea is dominant to green, and a maple dominant to yellow, so in the human subject one normal may be recessive, whilst another normal is dominant to the abnormal? If this does happen, it may be that these "last abnormals" were recessive to the normals whom they married. Now, if each line of descent had stopped short at the last abnormal, the result would have been that 134 out of 274 descendants of Jean Nougaret were abnormal, and this gives a percentage of 48.9, a remarkably close approximation to the theoretical 50 per cent., so that "we must pause before we accept" Professor Pearson's statement that "Nettleship's pedigree goes a long way to prove that they (Mendel's rules) do not hold for night blindness."

The facts (1) that all Nougaret's three children were night blind, and (2) that the disease has only been transmitted by affected individuals are also in accord with Mendel's results.

Professor Pearson adds: "Similar criticism may be applied to more than one other case cited by Dr. Drinkwater." I will only refer to the cases of tylosis mentioned in Dr. Gossage's paper.[1] There are three charts given. The first shows 6 abnormals out of 10 individuals; the second, 15 out of 27. The third chart is particularly suggestive. Here the disease originated in a woman, who was a pure dominant, and transmitted the disease to every one of her twelve children; a married daughter, being heterozygous, transmitted it to exactly 50 per cent. of her children (3 out of 6). These facts are *perfectly* Mendelian, and agree with the rules D × R = D (R), and D (R) × R = D (R) and R in equal numbers.

In conclusion, I think that all who have studied the subject will agree with Professor Pearson in emphasizing "the urgency for collecting far more material." What we wish to arrive at is the truth.—I am, etc.,

Wrexham, Dec. 8th. H. DRINKWATER.

THE HEART-INDEX INTERVAL IN AORTIC REGURGITATION.

SIR,—I read with much interest Dr. Broadbent's communication on this subject in the JOURNAL of December 19th, 1908, as it recalls an old controversy which I thought was long since settled. I furnished complete proofs of the position maintained by Dr. Broadbent in an article published in the BRITISH MEDICAL JOURNAL in 1901, February 16th.

As Dr. Broadbent has not referred to my article in any way, I should like to point out that the *plus* or *minus* variations in the heart radial interval are in that article not only discussed but explained. I showed that the *plus* variation was not to be wholly explained by "the collapsed and empty state of the arteries between the beats, and partly to their large size and loss of tone," since these conditions do not invariably prevail in aortic regurgitation. I also showed that when these conditions did not prevail the absence of the presphygmic interval in aortic regurgitation could give rise to a *minus* variation.

[1] *Quarterly Journal of Medicine*, April, 1908.

The chief interest of my article lay not only in the proof of these facts, but that I offered an additional explanation of the phenomenon of heart radial delay in these cases, one which had not been noticed before. This I may be permitted to state again.

In a normal heart the blood pressure in the ventricle at the beginning of systole is about 20 mm. Hg; in less than one-tenth of a second the intraventricular pressure is raised to 150 or 200 mm. Hg; the effect is a sudden impulse or "slap" against the ventricular surface of the aortic valves, and the wave created thereby is sudden and of great velocity—28 ft. per second (Von Frey).

In aortic regurgitation, when the intraventricular pressure at the onset of systole is already 150 mm. Hg or upwards, the contraction is more of the nature of a steady push against a weight, and the resulting wave, not being created by impact, is a slowly propagated wave—that is, one of very much less velocity.

The elucidation of this point is the main object of this paper.

I also point out that the propagation of nervous impulse through a hypertrophied heart is more slow, and the large mass would for physiological reasons contract more slowly.

Apart from this, the tracings I gave were complete and conclusive as to the matter of fact then in debate.—I am, etc.,

PAUL M. CHAPMAN, M.D., F.R.C.P.

Hereford, Dec. 21st, 1908.

THE NEW PROVIDENT DISPENSARY SCHEME AT BIRMINGHAM.

SIR,—With the exception of the last paragraph of his letter in the JOURNAL of December 26th, 1908, I think the majority of the general practitioners in Birmingham will agree with Dr. R. R. Giddings on the above subject. This scheme has not yet, thank God, received the sanction of any general meeting of the local doctors. It is the old "*public medical service*" scheme, which a year ago we thought had been decently interred by a decisive majority of the profession, which has been galvanized into life by Mr. Neville Chamberlain, with the assistance of some few members of the General Practitioners' Union, who seem determined to "cut prices" to make a fortune (?). The ostensible reason for reviving this scheme is to relieve the hospitals from trifling cases which should never go to them. These cases almost invariably belong to the thriftless and wholly *improvident* classes, hence the new institution—under the derivation, "Lucus a non lucendo"—is to be called the "Birmingham and District *Provident* Dispensary." Mr. Arthur Chamberlain kindly suggested that we should educate these people into coming to the new dispensary, and Dr. Abbott of Aston shrewdly asked whether this was to form part of the curriculum of the future medical student. The majority of us have enough to do without trying to educate the baser fellows of the working class in sobriety or thrift. These men tell you they "pay a penny a week to the hospitals and are entitled to go there," but if their employers were to ask them to work overtime for the same wages they would strike.

The thing that appeals to those members who have not given it the consideration it deserves is the 70 per cent. of the subscription which is to come to their pockets. This is the bunch of carrots held on a stick before the donkey's nose that makes him prick up his ears and gallop when he is not at all sure of getting it for his pains. You must catch your hare before you cook it, and I venture to prophesy that the number of improvident people who will be enticed to join this provident dispensary will be infinitesimally small when divided amongst even fifty practitioners. I consider the printing of the rules and sending forms applying for appointment as medical officer to this scheme, before it has been submitted to the vote of the local practitioners, smacks very much of the impertinence which prompted another Chamberlain to start the "Consultative Institute" without even sounding the members of the profession in this district.

This has, doubtless, been a famine year for the general practitioner, and the shortage of work has alarmed some men. In nearly forty years I never remember anything like it. But the work will not be always so, and I hope my fellow members will prefer fighting with adversity—a sight said to be fit for the gods—than that they should drag their profession through the mire, and work for wages that an errand boy would despise.—I am, etc.,

Birmingham, Dec. 28th, 1908. E. T. BURTON.

SIR,—As one who must bear some portion of the responsibility for starting the new provident dispensary in Birmingham, may I crave your indulgence to explain a few points in connexion with the scheme, on which Dr. R. R. Giddings comments so severely in your issue of December 26th, 1908?

This new provident dispensary arose out of an endeavour to curtail the steadily increasing pressure on the out-patient departments at the general hospitals, a pressure which it is thought may be relieved by referring trivial cases to other and more suitable sources of medical treatment; and, secondly, by educating the public to understand that in all their minor difficulties they should not necessarily at once go to a hospital, but that they could obtain efficient relief for most of their smaller medical and surgical ills elsewhere, thus leaving the hospitals to their more proper function of relieving graver ailments. The committees of hospitals, whilst quite willing to refer trivial cases elsewhere—for instance, to the existing dispensaries, to private clubs, or to private practitioners—felt that a hiatus existed in that many of the poorer people have hitherto made no provision for, and would not know where to seek, medical relief within their small means. It was to meet this class of case especially that a provident dispensary was initiated.

The payment per member per annum is fixed at 5s., of which 70 per cent. is to go to members of the staff, the remainder being reserved for the provision of medicines, dressings, etc., the payment of the dispensers, and for secretarial expenses. Members of the medical staff are thus relieved of all burdensome details. This plan was adopted by the committee, which is constituted as explained below, and a provision was inserted that if at the end of a year this arrangement is not found to be equitable it should then be reconsidered.

In the initial stage of the scheme, before any regular committee had come into existence, I pointed out to those who were discussing the matter that if any scheme was to succeed it must give an adequate representation of the medical profession on its governing body as the great guarantee against abuse. To show that this security has been obtained I may point to the constitution of the governing committee of the dispensary, which consists of 29 elected representatives, together with a chairman and an honorary secretary elected by the committee, thus making a total of 31. No less than 14 of these *must* invariably be medical men and others *may* be; at the present moment there are 2 additional medical representatives elected by general hospitals, thus giving medical men a majority on the governing body.

No wage limit has been adopted, because whatever rules were laid down they would frequently prove unworkable, but a guarantee against abuse of the scheme lies in

Rule 8 (*b*) "It shall be open to any medical officer to decline to accept any individual patient"; and in Rule 11, "Admission.—Application for admission shall be made in the first instance through one of the medical staff, who shall deal with the case provisionally. He shall then report as to the advisability of the applicant being accepted or rejected, to the District Committee, who shall consider and decide upon the case at their next meeting."

I may explain that each District Committee consists of nine members of whom four *must* be members of the medical staff. If the members of the staff work loyally together no abuse should arise owing to persons, whose means make them unsuitable, taking advantage of this provident scheme.

Despite what Dr. Giddings regards as Gilbertian humour I am glad to say that the success of the scheme as far as the staff is concerned is already assured, and that it consists of registered medical men of *good repute*.

May I, in conclusion, express the opinion I have long held that each great centre of the community must find its own remedy for hospital abuse and similar medical ills, and that what may be suitable and applicable in one great city may not be so in another, owing to the variations in hospital, dispensary, and other arrange-

ments? We in Birmingham are now endeavouring to work out our own salvation.—I am, etc.,

Birmingham, Dec. 29th, 1908. GILBERT BARLING.

THE STATE REGISTRATION OF NURSES.

SIR,—In the JOURNAL of December 26th, 1908, Dr. Shuttleworth, speaking on behalf of the Asylum Workers' Association, states that the feeling on this question among those who are connected with institutions for the insane is pre-eminently one of strong objection to being left out of any scheme that may be proposed. For the Medico-Psychological Association, I can say positively that this was, and, as far as I know, is now, the case. It was a threat of such an injustice that drove into action the Parliamentary Committee of the latter association more than ten years ago, when I happened to be its chairman. The steps then taken averted the danger, but apparently did not remove it entirely. In 1905 there arose the same risk of exclusion, for, in spite of the evidence tendered by Dr. Shuttleworth and Dr. White to the Select Committee, it was stated at almost the last moment, on excellent authority, that admission to the register would only be accorded to those mental nurses who had added a minimum of one year's training in a general hospital to the requisite training in the asylum. In the emergency, Dr. Outterson Wood, the then President of the Medico-Psychological Association, took energetic and successful action. He showed to those with whom the responsibility for such a decision rested that this proviso would debar, as well *in futuro* as *in praesenti*, almost the whole female wing and the whole male wing of the large army of mental nurses. The result of this strong protest was that the proposed arrangement of having a separate portion of the register reserved for them was at once introduced.

An estimated number of 50,000 general nurses is mentioned in a former number of the JOURNAL as ready for entrance to the new register. At the present moment there are 15,000 men and women engaged in nursing the inmates of the institutions for the insane, which are regularly visited by the Lunacy Commissioners. This total does not include those who are employed in workhouse wards, or who are engaged in nursing the insane in private houses. Numbers alone will forbid the injustice that will attach to exclusion from a register. This being so, the arrangement provided appears to accord with common sense, and it will have the further merit of obviating somewhat Pharisaical argument on respective rights to inclusion.—I am, etc.,

Ticehurst, Dec. 26th, 1908. H. HAYES NEWINGTON.

SIR,—Other ladies than Mrs. Hadfield have been good enough to suggest that the reason of my opposition to the State registration of nurses is owing to the supposed (by them) result which they think would follow, that there would be a considerable drop in the funds of the London Hospital, because they imagine we should no longer be able to send out nurses to do private nursing at the end of two years.

Mrs. Hadfield is quite wrong. There is nothing in the bill which fixes any "time limit" to training, and it is almost too obvious for words that opportunity and teaching, and not time, is the essence of training. Thirty years at some hospitals would not train a nurse, never mind how good an examination she passed. We are quite content with the opinion of the hundreds of physicians and surgeons who employ our nurses every year. A two years' London Hospital trained nurse was good enough to be chosen to nurse His Majesty. We are quite satisfied, from experience, that our nurses are properly trained to undertake any work in two years, and the thousands of confidential reports we have at the hospital on this work establishes this beyond dispute.

Even if this Registration Bill ever passes the House of Commons, which I do not believe it ever will, as opposition to it grows every day, and even if the Council were to decide that they would not admit on to the register any nurse who had not had, say three years' training, that would not affect the London Hospital in the smallest degree, as our nurses would not register. All the bill provides is that no nurse can call herself a "registered nurse" who is not on the register of this Council. Does Mrs. Hadfield seriously suggest, in face of the reputation which the London Hospital has gained for turning out good nurses, that if our nurses wished to register the Council would say that the London Hospital was "not approved of as a training school" (see Section 12)? Registration may possibly help indifferent nurses to pose as good nurses, guaranteed by people who know nothing about them; but, in my opinion, for what it is worth (and Mrs. Hadfield and her friends will say, "Very little"), few of the best nurses will register.

Lord Crewe, speaking on the Registration Bill in the House of Lords, said: "If I were ill and required the services of a nurse, I should get one from a hospital or institution of standing, and should not inquire whether or not her name was on the register," and so would most thinking people. I cannot at the moment think of a better advertisement for the private nurses of the London Hospital than that there should be two sorts of nurses—"registered" and "London Hospital nurses"—the one guaranteed by people who know nothing about them, the other by those who know all about them, and can guarantee their skill, and, what is equally important, their suitability for the special service they may be called on to perform.

Mrs. Hadfield asks why matrons and nurses who are opposed to registration do not lift up their voices. She can hardly be aware of the deputation which went to Lord Crewe on the subject, nor of the memorandum against registration signed by 163 matrons of London and provincial hospitals, by 484 nurses (without any canvassing), and by a great number of the leading members of the medical profession.

We, who are opposed, do not ignore the bill, but those engaged in work are too busy to agitate, and it is not easy to agitate against something which is non-existent. It is, for instance, only quite recently that an anti-suffrage agitation has commenced. There will be plenty of time to make ourselves effectually heard when the bill gets within the region of possible passing. I see that all the Scottish training schools have met and seem opposed to the present bill, and that one society, which Lord Ampthill (of course inadvertently) quoted as being in favour of it, have written by its secretary to say it is opposed.—I am, etc.,

SYDNEY HOLLAND,
Chairman, London Hospital.

December 22nd, 1908.

A HOSPITAL FOR MENTAL DISEASES.

SIR,—In a leading article in the JOURNAL of December 19th, 1908, dealing with Dr. Henry Maudsley's munificent gift to the London County Council, the following words appear:

> These [that is, individual attention and close personal treatment, which are all-important in the early stage of mental disorder] are impossible in the wards of large asylums, where patients in every stage are perforce herded together, with the result that those whose disease is of the acute form sooner or later take the colour of their surroundings.

Surely the writer of this article cannot be aware of the modern management of asylums, in which hospital wards are provided for the new cases; and to write of such as being "herded" with the chronic cases is, to say the least of it, inaccurate, though a stronger word might not be out of place.

There are other matters touched upon in the article which might easily form material for discussion; but these I pass aside, as my main object in writing this letter is to express the regret that the advocacy of so excellent a cause as the Maudsley Hospital should be marred by unnecessary and erroneous statements.—I am, etc.,

R. H. STEEN,
Medical Superintendent, City of London Mental Hospital.

Dartford, Kent, Dec. 21st, 1908.

*** We may remind our correspondent that Dr. Maudsley in the letter conveying his offer to the London County Council, which was published in the BRITISH MEDICAL JOURNAL of February 22nd, 1908, page 457, said, in enumerating the advantages of a hospital for mental diseases:

> It is hoped that in a small institution, with several medical and other attendants, the patient and apt application of individual treatment, mental and medical, would bring about

recoveries which might not take place in large asylums in which multitudes are congregated and such individual treatment is almost impracticable.

In the report of the Asylums Committee as to the London County Asylums on which we commented in the article referred to by Dr. Steen, the following passage occurs:

The most forcible argument for the provision of the hospital, from the point of view of the patient, lies, as it seems to us, in the fact that it will provide opportunity for individual treatment and close personal attention, which are all-important in the early stages of mental disorder. At the present time, in connexion with the more modern of the London County Council asylums, there are detached buildings which afford facilities for the classification of the patients, and for the separate housing, as far as the villa accommodation will permit, of those who are amenable to treatment. But apart from this, the only means of classification are found in the ordinary wards of the asylums.

The report further refers to the fact that "there will be in the hospital an entirely different atmosphere to that of the ordinary asylum, an atmosphere, as Dr. Maudsley has expressed it, of sanity as opposed to one of insanity." Our article, like the report of the Committee, dealt with the London County Council asylums. We do not know the exact atmosphere of the City of London Mental Hospital, near Dartford, but Dr. Steen would seem to have strangely misunderstood our article, or not to have read the documents on which it was founded.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations indicated:

PRELIMINARY SCIENCES: *Mechanics and Physics.*—H. Ball, Brasenose; R. R. Baxter, St. John's; R. Boumphrey, Christ Church; A. W. Clemes, Magdalen; R. H. Crane, Keble; H. C. Doyne, Trinity; V. T. Ellwood, Pembroke; D. M. Ely, Exeter; H. T. Evans, Jesus; C. G. Faunin, Exeter; A. G. Harper, Magdalen; S. J. Heald, Lincoln; W. Hunter, non-collegiate; W. W. Johnson, Pembroke; D. H. Jones, Jesus; O. P. Jones, Jesus; E. H. Kennard, Exeter; T. S. Nelson, University; R. W. Poulton, Balliol; L. K. Underhill, Jesus; C. A. Vlieland, Balliol; J. S. Walker, Jesus; B. H. Wilsdon, Lincoln.

Chemistry.—W. Agar, Oriel; F. C. Baker, Balliol; H. Ball, Brasenose; R. R. Baxter, St. John's; W. G. V. Blogg, Keble; H. E. A. Boldero, Trinity; R. Boumphrey, Christ Church; B. A. Bull, Jesus; F. B. Chavasse, Balliol; A. W. Clemes, Magdalen; W. T. Collier, Balliol; R. H. Crane, Keble; K. M. Dyott, non-collegiate; V. T. Ellwood, Pembroke; H. T. Evans, Jesus; R. A. Fawens, Oriel; E. A. Fisher, Balliol; J. F. M. Floyd, Queen's; F. W. Haeffner, New; A. G. Harper, Magdalen; S. J. Heald, Lincoln; S. Jalland, Lincoln; O. P. Jones, Jesus; R. O. Lagden, Oriel; J. A. Liddell, Balliol; R. H. Lucas, Christ Church; T. S. Nelson, University; A. R. Nicholson, Worcester; Sir W. L. Parker, Bart., New; G. D. Pidgeon, Christ Church; R. W. Poulton, Balliol; O. B. Pratt, Christ Church; N. D. Pringle, Lincoln; E. Scott, St. John's; F. G. L. Scott, Merton; G. P. Selby, New; C. P. Sells, Merton; L. K. Underhill, Jesus; C. A. Vlieland, Balliol; F. J. West, Christ Church; B. H. Wilsdon, Lincoln.

Zoology.—V. T. Ellwood, Pembroke; E. Scott, St. John's.

Botany.—W. H. Bleadon, Brasenose; J. C. Davies, New; C. Dean, Trinity; V. T. Ellwood, Pembroke; D. P. McDonald, Oriel; G. A. Maling, Exeter; Hon. P. A. Methuen, New; T. L. Price, Keble; G. S. Robinson, Exeter; E. R. Speyer, New; A. B. Thompson, New; B. E. Wall, Lincoln; D'A. W. Ward, Trinity; J. F. West, Christ Church.

Physics.—P. G. Doyne, Trinity; O. H. Gotch, New; J. L. Kathju, Exeter; O. G. Parry-Jones, Magdalen; G. D. Pidgeon, Christ Church; H. M. Pope, Lincoln; O. B. Pratt, Christ Church; S. K. Ray, Exeter; C. P. Sells, Merton; O. Sidky, Merton; G. Stanger, Lincoln; J. W. Steell, Trinity; D'A. W. Ward, Trinity.

FIRST B.M.: *Organic Chemistry.*—R. G. Barnes, Christ Church; J. D. Batt, Trinity; A. Booth, B.A., Keble; E. W. Carrington, Keble; G. W. Carte, B.A., New; J. C. Davies, New; C. Dean, Trinity; P. G. Doyne, B.A., Trinity; S. D. Gurney, Wadham; R. St. A. Heathcote, New; E. W. N. Hobhouse, New; H. S. Knowlton, Keble; D. P. McDonald, Oriel; W. W. Waller, New.

Materia Medica.—C. W. Armstrong, B.A., Jesus; C. H. Budd, B.A., Oriel; A. W. Dennis, Keble.

Anatomy and Physiology.—G. E. Beaumont, University; A. W. Donaldson, Hertford; N. F. Hallows, Keble; W. F. Harvey, B.A., Balliol; N. S. Lucas, B.A., New; E. O'Connor, M.A., Lincoln.

FINAL B.M.: *Pathology.*—R. F. Bridges, B.A., University; O. L. V. S. de Wesselow, B.A., Corpus Christi; P. C. Fowell, B.A., St. John's; N. Glover, B.A., Trinity; J. G. Z. Jessel, B.A., University; J. F. Penson, B.A., non-collegiate; E. W. M. H. Phillips, B.A., Jesus; E. P. Poulton, B.A., Balliol.

Forensic Medicine and Public Health.—C. N. Binney, B.A., Corpus Christi; P. N. Cave, B.A., University; C. D. H. Corbett, B.A., University; O. L. V. S. de Wesselow, Corpus Christi; C. Gouldesbrough, M.A., Christ Church; A. H. Savage, B.A., New; T. S. Wright, M.A., Brasenose.

Medicine, Surgery, and Midwifery.—G. D. H. Carpenter, B.A., non-collegiate; M. Davidson, B.A., Trinity; O. L. V. S. de Wesselow, B.A., Corpus Christi; H. E. Gibson, B.A., Queen's; H. M. C. Green, B.A., Wadham; J. F. Hornsey, B.A., Wadham; G. E. Thornton, B.A., Oriel; D. B. Tood, B.A., Lincoln.

UNIVERSITY OF CAMBRIDGE.

THE following degrees were conferred on December 10th, 1908:

M.B.—B. C. Ghosh, Joh.; J. H. Board, Pemb.
B.C.—H. J. Gauvain, Joh.; B. C. Ghosh, Joh.

Candidates have been approved at the examination indicated

FIRST M.B. *(Part I)*: E. D. Adrian, Trin.; E. H. R. Altounyan, Emm.; A. L. Anthony, Joh.; J. J. O. Beven, Christ's; E. J. Bradley, Jes.; G. D'R. Carr, Cai.; G. F. Clifton, Down; G. M. Cowper, Trin.; D. Crellin, Joh.; H. L. Cronk, Jes.; E. C. Cunnington, Corp. Chr.; E. D. D. Davies, Christ's; R. G. M. Davies, Pemb.; A. T. Edwards, Joh.; J. M. Evatt, Cai.; G. L. T. Franks, Cla.; L. S. Fry, King's; C. L. Gimblett, Cai.; C. H. M. Gimlette, Cai.; W. B. Gordon, Cla.; W. T. Hare, Christ's; B. B. Jareja, Trin.; S. D. Kilner, Emm.; A. A. Lees, Emm.; M. L. Loveless, Pemb.; W. M. Lupton, Cla.; J. B. Matthews, Cla.; E. S. Mawe, King's; R. F. S. Morton, Trin.; D. M. Muir, Trin.; C. C. Okell, Joh.; A. E. Panter, Cla.; V. C. Pennell, Pemb.; J. S. Pooley, Trin.; R. N. Porritt, Cai.; W. B. Purchase, Sid. Suss.; J. R. Rees, King's; A. St. Johnston, Trin.; L. E. S. Sharp, Trin.; A. C. S. Smith, Trin.; A. G. G. Thompson, Pemb.; J. B. Thomson, Trin.; E. W. Todd, Trin.

FIRST M.B. *(Part II)*.—E. D. Adrian, Trin.; H. N. Atkinson, Joh.; H. J. Bower, Emm.; I. M. Brown, Down.; S. Butt, Joh.; J. S. Clarke, Magd.; V. H. Coates, Cai.; J. A. C. Croft, Trin.; H. J. M. Cursetjee, Cai. W. H. Edgar, Trin. H.; G. L. Ferguson, Jes.; G. T. L. Franks, Cla.; J. H. Getty, Cai.; C. H. M. Gimlette, Cai.; W. B. Gordon, Cla.; E. T. Halnan, Trin.; H. G. Hooper, Emm.; B. L. Hutchence, Cai.; B. B. Jareja, Trin.; F. C. Lapage, King's; E. S. Mawe, King's; T. W. Melhuish, Pemb.; F. M. Mosely, Joh.; V. C. Pennell, Pemb.; R. N. Porritt, Cai.; W. B. Purchase, Sid. Suss.; L. E. S. Sharp, Trin.; A. G. Shera, Emm.; A. C. S. Smith, Trin.; J. R. Stoddart, Joh.; A. G. G. Thompson, Pemb.; A. W. Uloth, Pemb.; A. G. Williams, Cai.; F. A. Williamson, Queens'.

SECOND M.B.—G. W. M. Andrew, B.A., Emm.; H. C. Attwood, B.A., Cai.; H. W. Barnes, B.A., Jes.; A. H. Birks, B.A., Cai.; H. H. Brown, B.A., Cai.; E. Calvert, Joh.; C. G. H. Campbell, B.A., Joh.; J. W. H. Chun, Trin.; H. F. Comyn, B.A., King's; H. J. Couchman, B.A., Cai.; J. Deighton, Trin.; J. W. Dew, Cla.; E. L. Dobson, King's; G. W. B. Garrett, B.A., Cai.; E. M. Grace, B.A., Christ's; E. F. W. Grellier, Down.; S. M. Hattersley, Emm.; J. R. Heath, B.A., Trin.; R. Heaton, B.A., Christ's; A. E. Herman, B.A., King's; D. D. B. Jay, B.A., H. Selw.; H. G. G. Jeffreys, B.A., Trin.; W. L. Johnson, B.A., Pemb.; I. W. Joynt, B.A., Emm.; A. Kennedy, B.A., Cai.; G. L. Keynes, Pemb.; A. J. McNair, Emm.; Q. Madge, Emm.; H. H. Matthias, King's; G. O. Maw, Pemb.; G. W. Mitchell, B.A., Cla.; R. S. Morshead, B.A., Trin.; M. N. Perrin, Pemb.; C. H. G. Philp, B.A., Joh.; E. G. T. Poynder, Cla.; E. C. Rayner, B.A., Cai.; L. C. Rivett, Trin.; F. H. Robbins, Pemb.; F. G. Rose, B.A., Joh.; H. W. Scott, B.A., Cla.; A. S. Seabrooke, B.A., Christ's; F. T. Shackell, B.A., Pemb.; R. A. Sherman, Cai.; T. H. G. Shore, Joh.; G. Sparrow, B.A., Cai.; W. A. Stokes, B.A., Emm.; J. L. M. Symns, B.A., Cai.; J. F. Taylor, B.A., H. Selw.; G. R. S. Thomas, Down.; F. S. Tinker, B.A., Pemb.; J. R. Waddy, Pemb.; C. B. Wainwright, B.A., Cai.; L. C. Walker, B.A., Christ's; F. W. Watkyn-Thomas, Trin.; A. J. Waugh, B.A., Pemb.; Ll. M. Weeks, B.A., Cai.; S. M. Wilcox, Emm.; R. W. Willcocks, B.A., Cai.; B. H. C. Wilson, Trin.; J. Winterbotham, King's.

THIRD M.B. *(Part I)*.—W. B. Alcock, Trin. H.; L. A. P. Anderson, Emm.; W. A. Anderson, B.A., Cla.; H. G. Baynes, B.A., Trin.; C. H. B. Booth, B.A., King's; A. S. Cane, B.A., King's; E. G. S. Cane, B.A., Jes.; F. G. Chandler, B.A., Jes.; A. F. Comyn, B.A., Pemb.; K. Comyn, B.A., H. Selw.; R. F. P. Cory, B.A., Cai.; H. L. Duke, B.A., Cai.; H. G. Earle, B.A., Down; C. Ede, B.A., King's; J. T. Fox, B.A., Sid. Suss.; H. G. Greaves, B.A., Emm.; A. C. Johnson, B.A., Down.; F. I. M. Jupe, M.A., Down.; T. H. Just, B.A., Trin.; W. Ledlie, M.A., Christ's; C. Mackenzie, M.A., Emm.; W. G. Marsden, B.A., Emm.; O. de B. Marsh, B.A., Pemb.; A. H. Moore, B.A., Trin.; M. W. B. Oliver, B.A., Trin.; J. W. Pigeon, B.A., Christ's; H. B. Pope, B.A., Cai.; L. Powell, King's; J. B. Pulling, B.A., Christ's; R. A. Ramsay, B.A., Cai.; A. E. Rayner, B.A., Cai.; W. F. Rhodes, B.A., H. Selw.; F. E. W. Rogers, B.A., Emm.; W. D. Ross, B.A., King's; S. H. Rouquette, B.A., King's; H. B. G. Russell, B.A., Sid. Suss.; W. A. Russell, B.A., Emm.; A. Sandison, B.A., Trin.; F. J. Thorne, B.A., Jes.; W. W. C. Topley, B.A., Joh.; J. B. A. Wigmore, B.A., Cai.; N. S. Williams, B.A., Cla.; C. R. Wright, B.A., Christ's.

THIRD M.B. *(Part II)*.—A. G. Atkinson, B.A., Trin.; G. G. Butler, B.A., Emm.; H. Chapple, B.A., Joh.; F. J. Cleminson, M.A., Cai.; A. H. Crook, B.A., Christ's; L. T. Dean, B.A., Sid. Suss.; H. B. Elton, B.A., Cai.; A. C. D. Firth, B.A., Trin.; C. L. Forde, B.A., Cla.; G. A. F. Heyworth, B.A., Trin.; W. H. Hodgson, B.A., Christ's; B. Hughes, M.A., H. Selw.; W. M. Jeffreys, B.A., Trin.; J. L. Joyce, B.A., King's; H. Lee, B.A., Joh.; C. Mackenzie, M.A., Emm.; R. M. Moore, B.A., Joh.; H. Parsons, B.A., Cai.; R. F. Priestley, B.A., Cai.; C. Raymond, B.A., Cai.; E. N. Russell, B.A., Trin.; O. R. Smale, B.A., Cai.; A. E. Stansfeld, B.A., Joh.; A. C. Sturdy, B.A., Pemb.; R. Svensson, B.A., Cai.; F. C. Trapnell, B.A., King's; W. W. Treves, B.A., Cai.; R. M. Vick, B.A., Jes.; A. C. Warren, M.A., Emm.; T. N. Wood, B.A., Pemb.; A. E. M. Woolf, B.A., Emm.

An examination for the diploma in Tropical Medicine and Hygiene will commence on Wednesday, January 13th.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examinations indicated:

M.D. in Medicine.—H. H. Bashford, London Hospital; Dorothy C. Hare, London (Royal Free Hospital) School of Medicine for Women; C. L. Morgan, St. Thomas's Hospital; J. M. O'Meara, University College Hospital; W. M. Sadler (University Medal), University College Hospital; W. O. Sankey, St. Thomas's Hospital; W. L. Scott, University College Hospital; C. A. Stidston, St. Bartholomew's Hospital; T. M. Tibbetts, University of Birmingham: *Ivy E. Woodward, London (Royal Free Hospital) School of Medicine for Women.

* Obtained the number of marks qualifying for the University Medal.

M.D. in Pathology.—O. C. Gruner (University Medal), University of Leeds.

M.D. in Midwifery and Diseases of Women.—F. Alcock, Guy's Hospital; D. H. de Souza, D.Sc., University College Hospital; R. A. Hendry (University Medal), University of Liverpool; Ethel F. Iredell, B.A., London (Royal Free Hospital) School of Medicine for Women; C. A. L. Mayer, Guy's Hospital; A. Randle, University College Hospital.

M.D. in State Medicine.—Barbara Tchaykovsky, B.Sc., London (Royal Free Hospital) School of Medicine for Women and University College.

M.D. in Tropical Medicine.—H. R. Nutt, St. Mary's Hospital and London School of Tropical Medicine; O. Marriott, Guy's Hospital and London School of Tropical Medicine.

M.S.—W. R. Battye, B.Sc., University College Hospital and St. Bartholomew's Hospital; A. J. Blaxland, University College Hospital; C. A. Moore, University College Bristol and London Hospital; H. J. Nightingale (University Medal), St. Thomas's Hospital; *H. B. Whitehouse, St. Thomas's Hospital and University of Birmingham.

* Obtained the number of marks qualifying for the University Medal.

UNIVERSITY OF LEEDS.

FACULTY OF MEDICINE.

THE following cannidates have been approved at the examination indicated:

FINAL M.B., CH B. *Part I.*—W. T. Hessel, A. Riley, C. G. K. Sharpe, and A. E. Taylor.

Part II.—H. Vallow.

The degree of M.B., Ch.B. has been conferred on Mr. Vallow, and the diploma in Public Health awarded to Captain H. C. R. Hime, M.B., Ch.B. Victoria.

THE NEW IRISH NATIONAL UNIVERSITY.

AT the first meeting of the Senate of the National University held last week, the Right Rev. William Walsh, D.D., Roman Catholic Archbishop of Dublin, was unanimously elected Chancellor.

UNIVERSITY OF DUBLIN.

AT the close of the Michaelmas term on Saturday, December 19th, 1908, the Senate of Dublin University met in the Examination Hall, Trinity College, and duly installed the Right Hon. Viscount Iveagh, K.P., as Chancellor, in succession to the late Earl of Rosse.

The following degrees were conferred at the same meeting:

M.B., Ch.B., B.A.O.—R. J. Attridge, J. C. Baker, J. F. Clarke, G. Halpin, G. A. Jackson, N. P. Jewell, G. Knapp, G. G. Mecredy, G. A. Nicholson, T. Ryan, F. N. Smartt, H. V. Stanley, H. S. Sugars, A. S. M. Winder.

M.D.—J. J. Abraham, R. Bailey, H. English, G. Halpin, D. F. Hunter, G. F. W. Leech.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.

DR. F. W. MOTT, F.R.S., senior physician to Charing Cross Hospital, presided at the prize distribution on December 18th, 1908. The report presented by the Dean, Mr. F. C. Wallis, F.R.C.S., referred with regret to Lord Kilmorey's resignation of the chairmanship of the hospital and to the death of Dr. Montague Murray. Dr. William Hunter had succeeded to the post of physician, and Dr. R. C. Jewesbury had been appointed assistant physician. Dr. Routh had been succeeded as Chairman of the School Committee by Dr. F. W. Mott. Owing to the able management of the secretaries of the Students' Club, particularly Mr. D. P. Williams, the long-wanted alterations in the club-room had been carried out. The prizes were presented by Mr. J. H. Morgan, consulting surgeon to the hospital. The Epsom Scholarship was won by Mr. A. M. Jones, the Huxley Scholarship by Mr. E. A. Sutton, the Governors' Clinical Gold Medal by Mr. T. W. Jones, and the Universities Scholarships by Mr. C. W. Shepherd and Mr. W. R. Thomas.

Mr. Morgan afterwards delivered an address to the students and their friends, expressing his congratulations on the successes which had been won in the examinations during the year and on the success of the Students' Club. He discussed the value of a small hospital as compared with a large hospital from the point of view of medical training. He said that he was not infrequently asked by parents to what school they should send their sons, and he found that it was the general impression that the larger the hospital the better the opportunity for learning. That he ventured to doubt. Six cases well studied and carefully noted were of more instructive value than sixty of which the student could have only a cursory knowledge. It was not the rare and obscure cases that they would have to deal with in private practice; what would serve them best was an intimate acquaintance with the more common types of disease. Once students had entered the wards or out-patient rooms as clerks or dressers they would largely have to instruct themselves. Careful note-taking was valuable, because it not only induced the habit of accurate observation, but it also impressed a case upon the mind in a way that nothing else could. It was once his fortune to gain a prize for a series of notes of cases, and though it was many years ago, every case was vividly recalled to his mind when he read the notes. If they had any facility for drawing, they should cultivate and make use of it in their notes—there was nothing which gave a better power of estimating size and proportion so useful alike to the physician and the surgeon. It used to be thought necessary for any one who sought to follow the higher lines of medical work to study at a German university or school, but so good and so practical was the teaching, and so great the experience to be gained at home, that in general it was better not to go abroad, except, perhaps, for special work.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE following gentlemen have been approved at the twenty-eighth sessional examination:

*Captain H. R. Dutton, I.M.S., *Captain H. E. Stanger Leathes, I.M.S., *J. Macgregor Smith, *W. H. Thresher, *†H. B. Kent, *Captain H. C. Brown. I.M.S., *†T. H. Suffern, †H. S. Coghill, A. Copland, S. R. Shirgaokar, †J. G. Copland, A. G. Payne, P. Stallard, S. A. McClintock, †P. F. Foran, †S. C. G. Fox, †O. G. F. Luhn, †T. H. Dugon, Miss E. Shepheard, W. C. Hossack, Captain A. Spitteler, I.M.S., A. Tröndle, †S. Maclaine, J. A. Browne, O. Marriott, †E. Slack.

* With distinction. † Colonial Service.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

Surgery.—*†D. F. Dobson, *J. M. Fishe, *W. N. Pickles, *†A. F. Reardon.

Medicine.—*†H. W. B. Danaher, *†D. F. Dobson, *†J. M. Fishe, *†J. S. H. Lewis, *†H. A. Parker, *†W. N. Pickles, *S. H. Watton, *†R. P. Wylde.

Forensic Medicine.—A. H. C. Dawes, D. F. Dobson, J. M. Fishe, W. N. Pickles, H. T. Roberts.

Midwifery.—D. F. Dobson, J. M. Fishe, J. B. Moore, W. N. Pickles, G. G. Rigby, J. W. Williams.

* Section I. † Section II.

The diploma of the Society has been granted to Messrs. D. F. Dobson, H. A. Parker, and A. F. Reardon.

Contract Practice.

FRIENDLY SOCIETIES AND MEDICAL CONTRACT RATES.

SIR,—Letters appear periodically in your columns referring to the remuneration received by club doctors, but nothing is *done* to remedy the grievance.

Perhaps the following facts about the financial position of the leading Friendly Societies may interest those who are paid by the same societies 4s. per annum for adults and 2s. per annum for juveniles.

	Capital. £ s. d.
Manchester Unity of Oddfellows	13,822,043 6 11
Ancient Order of Foresters	7,696,269 11 5
National Deposit Friendly Society	874,820 17 4
Rational Associated Friendly Society	600,000 0 0
Grand United Order of Oddfellows	1,446,063 17 0
Independent Order of Rechabites	2,018,635 0 0
Loyal Order of Ancient Shepherds, Ashton Unity	1,024,827 0 0
United Ancient Order of Druids	310,000 0 0
National United Order of Oddfellows... ...	400,000 0 0
Order of Druids...	188,360 0 0

These figures refer to 1908, and show that ten societies have between them a total capital of over twenty-eight million pounds. From the paper in which this statement appeared I quote the following:

> The registered friendly society usually provides a medical benefit, by which skilled medical attendance and medicine is secured to the members at about the same cost as in a collecting (insurance) company is paid for the collection of the contributions.

From this it seems that our skilled services are valued at the same rate as the unskilled work of a collector of pence.

Some years ago, when I held an appointment as colliery surgeon, my assistant was once invited to "have a drink" with a club patient. Upon his declining the offer, this is what the collier said: "Ah! you're too proud to drink with me, but you're nowt but my servant, my b—— servant"; and that, I think, exactly describes the position of affairs.

We, who have spent much time and money in getting qualified, are practically in a degrading bondage to the very men who themselves are always insisting on a fair wage, and we tamely submit, instead of taking a leaf out of their book, and by united action forcing them to come to our terms.

Is it not possible to get every medical man to promise not to accept club work excepting upon such terms as may be agreed to by a central committee? Surely those who do *not* hold club appointments could be brought to see that indirectly they would also benefit by supporting such a resolution, even if no higher motive would influence them.

So far as I can ascertain, the only reason why all club doctors do not strike for adequate pay is that they fear their colleagues or opponents would step in and take their appointments, which implies that our standard of conduct is considerably lower than that of the working man.

Is this really so? I doubt it, and believe that the majority of our members would be loyal.

Could not the experiment be tried—say in one Division—of sending circulars or postcards to *every* medical man in the district to ascertain how many would give their support?—I am, etc.,

South Brent. F. W. STYLE.

The Services.

PAY OF LIEUTENANT-COLONELS IN THE R.A.M.C. (TERRITORIAL FORCE).

WE are informed that the action of the War Office expressed in the letter of Sir E. W. D. Ward of November 17th, 1908, published in this column last week (p. 1898), is to be accounted for by the fact that in the Regular Army a medical officer above the rank of major never holds a regimental appointment. It was promised that a volunteer transferring to the Territorial Force should not lose his rank, a lieutenant-colonel R.A.M.C.(T.F.) consequently retains that rank in the service, but, as long as he serves regimentally, is held to be entitled to receive only the pay and allowances of a major.

HIGHLAND DIVISION NURSING SERVICE.

A MEETING of the Highland Division Nursing Service Committee of the Territorial Force was held in Aberdeen last week to consider details regarding the establishment of a nursing service in the North of Scotland, with a centre in Aberdeen. Matrons, Sisters, and nurses were enrolled, so that the service for the Highland Division is now complete. Miss MacNaughton, Aberdeen, is Organising Matron.

Medico-Legal.

UNIDENTIFIED BODIES.

IN each of two cases which occupied the time of the jury in the City of London on December 12th the identity of the deceased was a matter of some doubt. In the one case it was not determined at all; in the other it was eventually settled by the clothing. This case was one of drowning; when the body was removed from the water the features of the deceased could have been identified by any one familiar with them, but by the time the body was claimed they were unrecognizable. As a result the jury suggested to the coroner that he should communicate with the authorities and urge the provision of a proper refrigerating apparatus, so that bodies might be preserved unchanged for any period necessary. This suggestion is clearly to the point, because there must be numerous cases in which identification of a dead body is of immense importance not only to individuals but to the public. It is somewhat curious, however, that there should be need for such advocacy at the present date, for the value of refrigerators in connexion with public mortuaries was recognized not only by medical men but by the Legislature nearly twenty years ago. A clause on the subject may be found in the Public Health Act (London) of 1891, Section 93, providing for the fitting up of one or more suitable buildings to which dead bodies found in London and not identified, together with any clothing and other articles found with or on them, might be removed and preserved with a view to their ultimate identification. Furthermore, the point is one to which, we believe, Dr. Waldo and other coroners have repeatedly drawn attention. The delay, therefore, on the part of the authorities to take advantage of the power conferred upon them by the Act is not readily comprehensible. Another arrangement, the drawbacks of which are evident on the surface, is that by which mortuaries and coroners' courts are sometimes placed at a considerable distance apart; Southwark is an instance in point. The necessity to attend an inquest either as a juryman or as a witness is a sufficient infliction in itself without the addition of unnecessary waste of time, such as that which is inevitable when juries have to walk considerable distances to view bodies.

THE PECULIAR PEOPLE.

A VERDICT of manslaughter was returned at a coroner's inquest at Canning Town on December 19th, 1908, against the father and mother of a child which had had measles and pneumonia. The medical evidence showed that death had been accelerated by neglect to obtain medical assistance. The parents belonged to the sect known as the "Peculiar People," and in conformity with their beliefs sought no medical assistance. The mother testified that she had belonged to the sect for nearly thirty years. Of her eleven children, nine were living. Both parents were committed for trial on the coroner's warrant.

VALUE OF A PRACTICE.

JUNIOR.—The value of a practice under such circumstances as those stated would be very considerably depreciated, but to give on such data even an approximate value would be quite impossible.

PARTNERSHIP ACCOUNTS.

ACCOUNT asks if it is usual for the incoming partner of a firm to have access to the ledger used before his time. He also wishes to know whether, in the case of a patient paying money to the new firm, it should be applied to the settlement of their account, or whether the old firm has a prior claim to it for an old account still unsettled.

*** It is usual for an incoming partner to have access to the ledger used before his time, when necessary for the purpose of carrying on the common business. In the case of patients running long accounts, it might often be necessary to look up their financial record. He has no claim to have access for any other purpose. The payment of bills should be in the order in which they were contracted. When patients of an old firm continue to employ the new, the accounts of the old should be paid before those of the new, unless the former have become irrecoverable under the Statutes of Limitation.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

RELATIONS OF MEDICAL MEN TO PATENT MEDICINES.

OUR opinion is asked on the following matter: X. has a patient who, when living in another town, was given by Dr. Z. a mixture she is still taking. As it appears to suit her, X. wishes her to continue it if its ingredients are compatible with his other treatment. He has therefore asked Z. what it contains, but has been told by Z. that, while willing to supply the medicine to the patient whenever she requires it, he cannot disclose its contents because the formula was given him a year or two ago by an American who is about to bring out the mixture as a patent medicine.

*** We assume that X. has no interest whatever in the proposed patent medicine, but only considers himself in some way bound in honour not to disclose the formula he received from the American. Nevertheless, it is to be regretted that he should have used in his practice a remedy which is subject to such restrictions. It is a recognized rule that medical practitioners should not use secret remedies, and should not refuse to disclose the nature of any treatment they employ, therefore Z. cannot consistently with this rule continue to supply this medicine to his patients.

RIVAL CLAIMS TO A PATIENT.

B. AND H. are neighbouring practitioners in a small town, and are on friendly terms. M. is assistant to H. In the temporary absence of H., M. asked B. to see a boy with a crushed hand, and it was agreed that the boy should be sent to the hospital; and M. also asked B. to operate, he giving the anaesthetic. B. did so, but afterwards "claimed the case." M. is chagrined at this, and asks whether it is customary, or what was the proper procedure on the part of B. and M.

*** We are not quite clear what "claiming the case" means, but we should think it usual for the surgeon who performed the operation to continue the after-treatment. The notion that the surgeon's concern with the case ends with stitching up the wound seems out of date, as ultimate success so often depends upon subsequent attention to details.

THE TITLE OF "SENIOR."

ANTIPODES asks which of two practitioners has the right to call himself the senior—D., who practised for a short time in a time, but went away for a time; or T., who started practice two years before D. returned. The interval between D.'s going and returning is stated to have been some years.

*** We are not aware that it is customary in this country for practitioners to adopt the title or to style themselves "Senior Practitioner" in the town or village in which they live, and we should certainly deprecate its introduction as being invidious and exceedingly difficult to define. If, for example, it were taken to mean the man longest in practice in the place, it might so happen that he would be junior in age and in the date of his professional qualifications to his colleagues; but we do not think any other basis for the classification would be more satisfactory, although it is possible that a better solution has occurred to our antipodean colleagues. As D. seems to have practised in the town long before T., and on the whole for a longer period, he would seem to have most claim to call himself "senior."

Obituary.

GRIFFITH GRIFFITHS, L.R.C.P.EDIN., M.R.C.S.ENG., J.P., PONTARDAWE.

WE regret to announce the death of Dr. Griffith Griffiths, J.P., of Pontardawe, which occurred at his residence on December 17th, 1908, after a long illness. Dr. Griffiths was born in January, 1840, at Alltwen, Swansea Valley, the son of an independent minister—the Rev. Philip Griffiths, a man of marked individuality and the possessor of great influence in his sphere and time. After several years spent at the village school he went to the Normal College, Swansea, at that time the most noted secondary school in Wales, whose head master, Dr. Evan Davies, admittedly, apart from the success of the school, did more towards educational reform in Wales than any other man of his time. From school, as was then the custom, Griffiths was apprenticed to the late Mr. John Paddon, M.B.Lond., at Swansea, who at the time was Surgeon to Vivian's copper works, and conducted also a large private practice. In 1859 Griffiths entered at University College Hospital, and whilst there obtained the gold medal in materia medica in 1861, and the first silver medal in midwifery in 1862. In 1864 he became M.R.C.S.Eng. and shortly afterwards L.R.C.P.Edin. At University College he had as fellow student Sir John Williams, and the strong friendship which then sprung up was known to have lasted throughout subsequent years. Before leaving London Griffiths served for a short time as house-physician to the Brompton Hospital for Consumption; he returned to Wales and settled in practice in Pontardawe, and soon after through a death vacancy succeeded to all the district public appointments as well as to an extensive private practice. He was a neat and painstaking surgeon and was much in request as an accoucheur. From his early manhood he was troubled more or less with winter cough; latterly this became aggravated and the usual complications supervened. From these he died on December 17th, leaving a widow and an only child, now married to Dr. O. Evans, who for some years had done much of his professional work.

A few years ago Dr. Griffiths was made a Magistrate for Glamorganshire, and until his health failed took a keen interest in petty sessional work. He was always very good company, and had a memory well stored with folk-lore and Welsh literature. In his younger days he was very fond of music, and devoted much time and labour to Welsh choir singing; it was the pride of his life to talk of the gold watch and chain presented to him by his father's congregation for his successful efforts with the chapel choir. At the Pontardawe Board of Guardians on December 17th, 1908, Mr. Herbert Lloyd feelingly referred to the death of Dr. Griffiths, and moved a vote of condolence with the family; the vote was adopted in silence.

WE regret to have to record the death, at Beyrout, on November 22nd, 1908, of JOHN WORTABET, M.D., in the 82nd year of his age. He was for many years Professor of Anatomy at the Medical College and Physician to the Hospital of the Knights of St. John in that city. He published some years ago an Arabic version of *Gray's Anatomy* for medical students in Syria and Egypt. He was also the author of several medical works in that language and the writer of a number of articles on plague, leprosy, and allied subjects in the British medical magazines. Dr. Wortabet was the recipient of the Order of the Medjidieh and of the Knights of St. John in recognition of his professional services. His death is mourned by three daughters and three sons, who survive him, two of the latter being members of the profession. His loss will be felt also by a large circle of friends, amongst whom are many of his former pupils.

Dr. JUSTIN LEMAISTRE, who died recently, was for many years Professor of Anatomy in the Medical School of Limoges, and a leading practitioner of that town. He was *interne* of the Paris hospitals, and took the degree of Doctor of Medicine in 1875. He was the author of writings on external oesophagotomy in children, peritonsillar abscess, and on the air of Limoges and its porcelain factories. He was the first to describe *perlèche*, a contagious disease of the mouth occurring in children caused by the *Streptococcus plicatilis*, which lives in wells, and is transmitted to the lips by unclean drinking vessels. This discovery was published in 1886.

DEPUTY INSPECTOR-GENERAL WILLIAM SPENCER LIGHTFOOT, R.N. (retired), died on December 14th, 1908. His commissions were thus dated: Surgeon, March 31st, 1880; Staff Surgeon, March 31st, 1892; Fleet Surgeon, March 31st, 1896; and Deputy-Inspector-General of Hospitals and Fleets on retirement from the service, June 9th, 1904. He was surgeon of the *Decoy* at the bombardment of the Alexandria Forts in 1882, receiving a medal with clasp and the Khedive's bronze star; he was also in the operations near Suakin, in the Eastern Soudan, in 1884, receiving an additional clasp.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Bela Weiss, of Vienna, sometime editor of the *Wiener medizinische Presse*, who had earned a high reputation by his writings on general subjects, aged 70; Dr. Eloi Dudon, Deputy Professor of Anatomy in the Medical Faculty of Bordeaux, and a surgeon of considerable reputation; Dr. Felizet, Surgeon to the Paris Hospitals and General Secretary of the Paris Surgical Society; Dr. Joffroy, Professor of Clinical Mental Pathology and Diseases of the Encephalon at the Paris Medical Faculty; Dr. Benjamin Anger, formerly Surgeon to the Paris Hospitals and *professeur agrégé* of the Faculty of Medicine; Dr. Alejandro San Martin y Satrustegui, Professor of Clinical Surgery in the Central University, Madrid; Dr. Vincenzo Brigidi, formerly Professor of Morbid Anatomy in the University of Genoa, and author of numerous monographs on pathological subjects, aged 70; Dr. Theodore Jules Ernest Hamy, Professor of Anthropology at the Paris Museum of National History, Member of the Paris Academy of Medicine, and author of a treatise on human pathology and of numerous works on anthropology, aged 66; Dr. Georg von Rindfleisch, Professor of Pathology in the University of Wurzburg, author of a *Textbook of Morbid Histology*, *Elements of Pathology*, and smaller works on tuberculosis and scrofulosis, in his 72nd year; Dr. Ferdinand Jouvenel, Director of the Sanatorium at Montigny en Ostrevent, founded a few years ago under the auspices of the Ligue du Nord contre la Tuberculose, a post for which he was selected by Professor Calmette; Dr. Andrew J. McCosh, a prominent surgeon of New York, aged 50; and Professor J. Schnadel, Director of the First Ophthalmological Clinic of the University of Vienna, aged 66.

Public Health AND POOR-LAW MEDICAL SERVICES.

EXAMINATION OF FOREIGN MEAT.

REGULATIONS made by the Local Government Board under the Public Health (Regulations as to Food) Act, 1907, subjecting certain kinds of imported meat intended for consumption in this country to more stringent examination, came into force on January 1st. The Board, being very properly desirous of securing uniformity in the administration of the regulations at the various ports of entry, has issued a circular to all the port sanitary authorities and certain borough and district councils containing advice as to the manner of procedure to be adopted under particular circumstances. Imported pork in portions less than the entire carcass may now be detained by the Customs officer for examination by the medical officer of health unless the package containing the consignments is accompanied by a certificate from a competent authority in the place of origin that the pig at the time of slaughter was free from disease, and that the dressing, preparing, and packing of the carcass has been carried out properly and with a view to the prevention of danger to the public health if the meat is used as an article of food. A schedule of official certificates which will be accepted by the Board is in course of preparation. Where the presence of tuberculosis is discovered in pigs imported whole the medical officer of health is advised to condemn the whole carcass as unfit for human consumption in accordance with the recommendation of the Royal Commission on Tuberculosis, 1896. It is very certain that the work of the sanitary officials concerned in the administration of these regulations will be very great, so that it is not at all surprising to find that the Local Government Board anticipate the necessity for appointing assistant officers, who, it is needless to say, should be specially trained for the work they will be required to perform.

Hospitals and Asylums.

JAMES MURRAY'S ROYAL ASYLUM, PERTH.

THE annual report of the committee and the medical superintendent, Dr. A. R. Urquhart, of this private asylum contains the medical superintendent's report for the year ending March 31st, 1908, and the statistical tables for the year 1907. These latter show that, excluding voluntary boarders, there were 123 patients in the asylum on January 1st, 1907, and 122 on the last day of the year. The total cases under treatment during the year numbered 158, and the average number daily resident 124.09. These numbers show slight falls on those of the two previous years. During the year 35 were admitted, of whom 28 were first and 7 not-first admissions. Of the total admissions, in 3 the attacks were first attacks within three, and in 9 more within twelve months of admission; in 9 not-first attacks within twelve months of admission; in 13, whether first attacks or not, of more than twelve months' duration on admission; and in 1 case of congenital origin. The admissions were classified according to the forms of mental disorder into: Mania of all kinds, 13; melancholia of all kinds, 12; dementia, 2; delusional insanity, 4; confusional insanity, 2; and circular insanity and congenital mental defect, 1 each. The probable etiological factors were assigned in the following numbers: Alcohol in 5, syphilis in 2, the climacteric in 6, previous attacks in 13, and mental strain and worry in 5. An insane heredity was ascertained in 18, a neurotic heredity in 12, and an alcoholic heredity in 9. During the year 11 were discharged as recovered, giving a recovery-rate on the admissions of 31.43 per cent., as compared with the average for the decade of 34.03 per cent.; 14 as relieved, and 1 as not improved. During the year 10 died, giving a death-rate on the average numbers resident of 8.01 per cent., as compared with the average of 6.08 per cent. for the decade. The deaths are returned as being due in 3 to influenza, and the remainder in single numbers to general paralysis, valvular heart disease, chronic alcoholism, pneumonia, pulmonary consumption, gangrene of lung, and iodine poisoning. In the last-mentioned case the patient was suffering from iodine poisoning on admission. The admirable condition and management of this asylum is commented upon in highly favourable terms in the report of the Lunacy Commissioners for Scotland.

INVERNESS DISTRICT ASYLUM.

FROM the annual report of Dr. R. B. Campbell, the medical superintendent of the Inverness District Asylum, for the twelve months ending May 15th, 1908, we see that on May 16th, 1907, there were 672 patients on the register, and that on May 15th, 1908, there were 682. The total cases under care during the year numbered 835, and the average number daily resident 662. During the year 163 were admitted, of whom 116 were first and 47 not-first admissions. The readmissions formed 28 per cent. of the admissions, but this apparently high readmission-rate was partly accountable to the fact that constant effort is made to board out with suitable guardians quiet and chronic cases, and that though the majority of these do well outside the asylum, some break down and have to be readmitted, thus factitiously swelling the readmission-rate. Of the total admissions 42, or 25 per cent., were in average bodily health and condition, the remainder being either in indifferent or weak and exhausted condition. In 73 the attacks were first attacks within three and in 22 more within twelve months of admission; in 47 not-first attacks within twelve months of admission; in 9 whether first attacks or not, of more than twelve months' duration on admission; and the remaining 12 were congenital cases. They were classified according to the forms of mental disorder into: Mania of all kinds, 75; melancholia of all kinds, 56; secondary dementia, 18; general paralysis and acquired epilepsy, 1 each; and cases of congenital or infantile defect, 12. As to the principal probable etiological factors in the admissions, alcohol was assigned in 16, or 9 per cent., syphilis in none, critical periods in 44, and "moral" causes in 51. Hereditary influences were ascertained in 38, or 23.3 per cent., and, as already stated, congenital defect existed in 12. During the year 62 were discharged as recovered, giving a recovery rate on the admissions of 38 per cent.; 17 as relieved and 19 as not improved. The 17 discharged as relieved were harmless patients, incapable of further improvement in the asylum, and were handed over to their relatives or boarded out with suitable guardians, and the 19 not improved were sent to the lunatic wards in the Long Island poorhouse, licensed by the Commissioners in the autumn of 1907 for the reception of chronic insane patients who did not require asylum treatment, but who were unsuitable for family care. During the year also 55 died, giving a death-rate on the average numbers resident of 8.3 per cent. The deaths were due in 15 to cerebro-spinal diseases, with only 3 from general paralysis; in 31 to chest diseases, including 11 deaths from pulmonary consumption—or 20 per cent. of the total deaths—and 14 from acute lobar pneumonia; in 7 to abdominal diseases; in 1 to sarcoma of skull and in 1 to asphyxia, the patient, not previously suspected of being suicidal and convalescent at the time, drowning himself in Beauly Firth. The asylum was visited by influenza, which was followed by pneumonia in many cases, but no other zymotic diseases appear to have attacked the patients.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

CHANGE OF ADDRESS.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL have been removed to 429, Strand.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—
EDITOR, 2631, Gerrard. GENERAL SECRETARY AND MANAGER, 2630, Gerrard.
MEDICAL SECRETARY, 2634, Gerrard.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

☞ We would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided. Correspondents are asked to write upon one side of the paper only.

ENDEMIC MALARIA?

ANOPHELINE writes: With a view to ascertaining the existence or otherwise of endemic malaria in a locality, 246 native children under 10 years of age were examined in November for enlargement of the spleen, and in 18 instances (roughly 7 per cent.) it was found to be appreciably enlarged. The vast majority of the children were resident in the locality for from four to six years, but were born elsewhere in places which were probably malarious. Mosquitos exist in the locality in question, but the classes have not been differentiated. The entire European population do not spend more than a year in the locality and come from places where malaria is endemic. Attacks of malarial fever are very common amongst them in the proportion of 500 cases per 1,000 of population annually for the last seven years. The diagnosis has been verified microscopically in about 25 per cent. of these cases, one smear of blood only being, as a rule, examined before the administration of quinine. The climate favours the occurrence of chill; the thermometer being generally about 80° F. in the shade with an annual range of from 72° F. to 96° F., so that slight physical exertion causes free diaphoresis. High winds are common and these acting on the sweating skin cause chill. The question at issue is—Is malaria endemic in the locality and, if so, what adverb would best describe its degree of prevalence—slightly, distinctly, very?

ANSWERS.

TREATMENT OF TAPEWORM IN CHILDHOOD.

MR. FREDERICK B. POWER (Director, The Wellcome Chemical Research Laboratories) writes: In the issue of the BRITISH MEDICAL JOURNAL of December 19th, 1908, p. 1848, I have observed a paragraph respecting the "treatment of tapeworm in childhood." We have recently been interested in an investigation of the constituents of pumpkin seeds, which, as you may know, are recognized by the United States *Pharmacopoeia* under the title of "Pepo," and have long been regarded as one of the safest and most efficient taenifuges. Although this action has been attributed to the fatty oil expressed from the seeds, it has not yet been definitely established. It would be of considerable interest from a scientific as well as a practical point of view, to obtain some confirmation of the activity of this oil for the purpose indicated, and if your correspondent would like to try it, I should be very glad to supply him with the requisite quantity without cost. The oil is bland, not unpleasant to the taste, and if it should not prove effective it can do no harm to the patient.

TREATMENT OF FOLLICULAR STOMATITIS.

W. G. writes: If "M. W." will try touching each spot as soon as the slightest soreness is noticed with a small crystal of copper sulphate, and repeating once or twice during the next day, I think he will find the ulcers arrested. The patient should avoid all uncooked vegetables and fruit whenever there is the least tendency to stomatitis, and a course of soda and rhubarb is about the best preventive.

RINGWORM OF THE SCALP.

H. H. writes: If "H. S. B." (December 26th, 1908) will paint the infected areas with tincture or liniment of iodine daily, after shaving the head, he will get rid of the trouble in a few weeks.

DR. WALTER GRIPPER (Wallington) writes: I have unfortunately had a long experience in an institution. Of course, where strong remedies such as croton oil have been used recently, or any irritation remains, it is somewhat risky to expose to the *x* rays, but I have on occasion had the patches themselves protected and the rest of the scalp depilated, so as to obviate any spreading, and then attacked each patch by careful needling with croton oil or epilating by electrolysis; the latter is somewhat painful for the moment, and should not be tried on large patches where a possible permanent alopecia would be much noticed. On the detection of a new case I now never attempt any remedies, but have the whole or such part of the scalp as is necessary exposed to the *x* rays, and find the time occupied in a cure lessened by one quarter at the least.

ADMINISTRATION OF DIPHTHERIA ANTITOXIN BY THE MOUTH.

R. G. H. writes: In answer to your correspondent's inquiries about the administration of diphtheria antitoxin by the mouth, I would strongly advise them to give the method a trial. With the exception of cases in which repeated vomiting is a prominent symptom, and which would make the retention of the antitoxin doubtful, I almost invariably give it in that way. In my experience it acts just as rapidly and certainly; it causes no gastric symptoms, it can be given at any time by the friends, and it avoids the disagreeable necessity of performing a painful little operation on a sickly child.

W. M. writes: I have always administered antitoxins by the mouth with satisfactory results. In diphtheria the improvement seems more rapid than in other cases where serum is given. The fact that the serum comes in contact with the direct seat of the infection seems to aid in the elimination of the virus from its stronghold. Quite recently I used the serum in two cases of diphtheria. The effect was marvellous. In one case the membrane dissolved rapidly, and in two days had disappeared; in the other not so quickly, but each day the membrane became thinner and less defined, until, in a week's time, it was gone, leaving the surrounding area clean and healthy. I had similar good results in septicaemia (puerperal), the temperature declining after the first administration. Although other measures were used and continued when giving the serum, the results were more directly noticeable after giving the serum by the mouth. I am convinced that this method is quite as satisfactory and, of course, much less troublesome and objectionable to the patient than the hypodermic method, and therefore my intention is to continue it. Some may contend that this method is not scientific, that the active properties of the serum may become destroyed in alimentary canal; possibly there may be some truth in this, but it is not all truth, as the results attending its oral administration are sufficiently convincing to me.

M.O.H. (Hants) writes: "For the last few years" I have made it my practice always to administer antitoxin by the mouth, excepting in very urgent cases, with unqualified success. Two years ago I had an epidemic to treat, and on this occasion administered over three hundred 2,000-unit doses without a failure.

LETTERS, NOTES, ETC.

NOTIFICATION OF BIRTHS ACT.

ALDERMAN J. C. MCWALTER, M.D.Brux., F.F.P.and S.G. (19, North Earl Street, Dublin), writes: As the Corporation of Dublin are just now considering the adoption of the Notification of Births Act, any practitioner who may object should at once lay his views before that body.

A DISCLAIMER.

DR. A. E. NAISH (Sheffield) writes: My attention has been called to an advertisement by the West Surrey Central Dairy Company stating that I have demonstrated the superiority of English dried milk over fresh cow's milk for the feeding of infants. This statement is not only unauthorized but wholly incorrect and misleading.

MEDICAL INSPECTION OF SCHOOLS.

ISOLATED writes: In the distribution of these appointments I am sure there must be many medical men who, like myself, think they have been treated very unfairly. Within three miles of my house are no less than seven village schools, three of them within a mile, in order to reach which the medical men appointed have to travel over between five and eight miles of bleak and uninhabited country. I am the senior medical practitioner in the district, and my claims have been entirely ignored. Their intrinsic value at a shilling a head is not worth considering, but there are likely to be more serious and far-reaching consequences.

A "PERNICIOUS" ENEMA.

THE *St. Mary's Hospital Gazette* tells a story of some one who made a complaint against the hospital that a relative had been killed by a "pernicious" enema. This was the interpretation of the diagnosis "pernicious anaemia" on the board by the patient's bedside.

TOOTHBRUSH BRISTLES AND APPENDICITIS.

MR. CORNELIUS A. GRIFFITHS, F.R.C.S. (Cardiff), writes: Three years ago I found a toothbrush bristle in the appendix of a girl aged 10 years, which I removed for recurrent attacks of pain. With the exception of numberless faecal "concretions" of varying degrees of density, this is the only "foreign body" I have found in an appendix, although I once found a living threadworm in the appendix of a man, which was amongst the contents of a hernial sac. I was operating in this case, however, for hernia and not appendicitis.

"THE BONE MARROW."

DR. W. E. CARNEGIE DICKSON (Pathological Department, University of Edinburgh) writes: In connexion with your kind review of my book on the bone marrow (JOURNAL, November 28th, 1908, p. 1616), may I venture to point out the following typographical error which occurs in it? In the sentence, "Dr. Dickson affirms that phagocytic cells are produced from the proliferating epithelium of the capillary wall," for "*epi*thelium," read "*endo*thelium." The review also states that "in Plate XII are given some excellent schematic representations of the development of the small lymphocyte into the adult polymorphonuclear cells and of the megaloblasts into the erythrocytes, etc." Unfortunately this statement, as it stands, gives an erroneous impression of the views expressed with regard to the development of these cells, as some of the schemes in this plate, to which reference is thus made, were drawn up to represent the views of other writers; and from these my own deductions, given in the accompanying text, differ very materially in certain points.

THE MARRIAGE OF FIRST COUSINS.

DR. ARTHUR TODD-WHITE (Leytonstone) writes: Your interesting article on the above subject reminds me that some years ago a young man—now holding a high colonial appointment—consulted me as to whether it would be advisable for him to marry his first cousin. My answer was, No; given on the following grounds: (1) Every family has some slight defect in some one or other direction—it may be a slight defect in sight or hearing or mental capacity, so slight that it does not show, but it is there; in the event of cousins marrying the children would get a double dose, and then what in the parents would not be noticed becomes in the offspring a serious defect. (2) I have never in my life come across a family of five or six children whose parents were first cousins where all the children were good specimens of the race. The most common defect in my experience is blindness. It may be unusual, but I have never come across a person born blind whose parents were not cousins. If cousins marry they may have one or two healthy children, but I am absolutely convinced they will not go on to five or six without some grievous defect appearing in one or other of the children. The most common causes of defective children are, first and most important, taking drugs to procure abortion in the early months of pregnancy; secondly, alcoholism; thirdly, consanguineous marriages; fourthly, syphilis. Starvation, tuberculosis, etc., do not in my experience produce physical defects in children. With regard to consanguineous marriages amongst savage races, we cannot compare them in any way with European; mental and physical defects are less common amongst natives, who lead healthy lives, and when the law of the "survival of the fittest" has not been interfered with; there are therefore in them no family defects to be reproduced, and a marriage between cousins has no bad influence on their children. What I maintain is, that, eliminate the four above causes of defect in children, even if the parents are tuberculous, starved, overworked, etc., if the children are brought up with care and properly treated, there is no reason why they should show any defect at any time; with regard to the offspring of tuberculous parents, unusual care would be necessary. But whatever care you take of the children whose parents come under the four headings above mentioned, a very great percentage of them will be defective mentally or physically; I should say quite 40 per cent.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication; and, if not paid for at the time, should be accompanied by a reference.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.